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ABSTRACT

An assessment of reading performance of a representative sample of students aged nine, thirteen, and seventeen years was conducted in Connecticut Public Schools to discover the percentage of students who could perform specific reading skills appropriate to their age and experience. Comparisons were made in the following categories: with national assessment scores of students of the same age groups; with students in the northeast; between sexes; and by size of the community in which the student attended school. The four reading objectives were whether a student could understand, analyze, judge, and use material correctly for his age and experience. Salient test results were: (1) Connecticut students scored higher than students nationwide; (2) students from fringe, medium, and smaller cities scored higher than the state's large city students; (3) students from small Connecticut cities scored higher than students nationwide from small cities; and (4) the state's large city students scored lower than large city students nationwide. Tests administered and complete statistical results are included. (Pages 55-68 have marginal reproducibility because of small print.) (Author/TB)

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ED 065842

REPORT ON

THE ASSESSMENT OF READING SKILLS

OF

CONNECTICUT PUBLIC SCHOOL STUDENTS

PERFORMED FOR THE

CONNECTICUT STATE BOARD OF EDUCATION

1971 - 1972

BY

THE INSTITUTE FOR THE STUDY OF INQUIRING SYSTEMS
3508 MARKET STREET
PHILADELPHIA, PENNSYLVANIA 19104

CS 000 096

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The Institute for the Study of Inquiring Systems wishes to take this opportunity to acknowledge our appreciation of the cooperation extended to us by personnel at all levels in the Connecticut State Department of Education and particularly to the Superintendents and School Principals and their staffs who were so helpful to us in the conduct of our pretests and Reading Assessment. Additionally, we wish to sincerely thank the staff members of the National Assessment of Educational Progress, without whose cooperation and assistance, this project and this report would not have been possible.

I. INTRODUCTION

BACKGROUND

In many states, the genesis for a state sponsored assessment program has resulted from the requirements for such studies for participants in the Elementary and Secondary Education Act.

In Connecticut, the State Board of Education was encouraged additionally by discussion and action of the Connecticut General Assembly that indicated a desire to evaluate the adequacy of educational programs in the public schools. Further, there was professional recognition in that new evaluation procedures could predict the degree of mastery of specific skills or outcomes by a particular age population. Such data have important implications for curriculum revision, teacher education, and numerous management decisions.

Accordingly, in July of 1971, the State Board of Education contracted with the Institute for the Study of Inquiring Systems for the first year of Connecticut's first state-sponsored educational needs study. The initial needs assessment was to be in the area of reading; selected because of the high priority given by the Connecticut State Board of Education to "Reading for the Seventies," a twelve part project set up by the State Board in November of 1970. The purpose of the "Reading for the Seventies" program was to improve reading instruction and teacher training in reading throughout the State. The Reading Assessment is expected to point the way toward improvements in the teaching of reading in Connecticut schools.

The specific purpose of the assessment was to determine the percentage of students of a given age who can perform each of a series of specific reading skills or tasks. From the results for a given skill or task, accurate predictions about the capabilities of all students in the age group to perform likewise will be made for communities with similar characteristics. Further comparisons for each task will be made for the State, the northeast, and the entire country.

In order to permit these comparisons, the Connecticut Reading Assessment has used available instruments and applicable procedures developed by National Assessment of Educational Progress, adapted where necessary to the particular requirements of the State of Connecticut.

This assessment program was financed through various provisions of the Federal Elementary and Secondary Education Act, and was directed and monitored by an Executive Group composed of staff members of the Connecticut State Department of Education.

NATIONAL ASSESSMENT OF EDUCATIONAL PROGRESS

The National Assessment of Educational Progress (NA) is the most extensive assessment project ever initiated in the United States. It originated in 1964 under the auspices of the Committee on Assessing the Progress of Education, and since July of 1969, it has been a project of the Education Commission of the States. The stated goal of National Assessment is to make available baseline census-like data on the educational attainments of young Americans based on particular educational objectives. National Assessment is therefore a data gathering project designed to provide specific information about the knowledge, skills, understandings, and attitudes of young people. The data are collected and reported at specific item levels, with each item designed to test a specific educational objective.

With results reported by item, there are no aggregate norms, and no results are reported in overall cognitive areas. The individual exercises are reported along with the percent choosing or producing both correct and incorrect answers for each exercise. Attention is directed at particular samples of behavior rather than at the summation of behaviors, and can therefore provide useful direction in teaching or curriculum evaluation, and overall decision making and fund allocation.

INSTITUTE FOR THE STUDY OF INQUIRING SYSTEMS

The Institute for the Study of Inquiring Systems (ISIS) was chartered in 1967 as a non-profit, tax-exempt organization, specializing in performing educational research for all levels of government. It has worked with the Pennsylvania Department of Public Instruction, various school districts, a consortium of Pennsylvania, New York, New Jersey, and Delaware, and the Office of Education of the Department of Health, Education and Welfare.

Throughout the planning, development, and administration of the Connecticut Reading Assessment, ISIS has worked very closely with National Assessment in order that the NA materials and procedures adapted for use in Connecticut would permit accurate, meaningful comparisons of the results. ISIS has also worked closely with the Executive Group of the State Department of Education to assure that the assessment adequately reflected Connecticut's educational goals and practices.

Any inquiries concerning the methodology or analysis used in this assessment should be addressed to Michael H. Halbert, Ececutive Director of the Institute.

II. PACKAGE DEVELOPMENT

In National Assessment terms, the assembly of questions, tasks, etc., administered to a single student is a "package." Many criteria had to be met in developing the packages used to assess the reading skills of Connecticut's 9, 13, and 17 year old students.

READING OBJECTIVES

Beginning even before contract award in July, 1971, reading specialists and other educators within the State Department of Education began formulating the goals of reading education and their particular behavioral outcomes. Inasmuch as National Assessment testing is objective oriented, it was essential that each of Connecticut's reading objectives be matched to those assessment exercises which would truly test Connecticut objectives. Since National Assessment's statement of their reading objectives was much lengthier and in much greater detail than Connecticut's, this matching was fairly tedious. Although a great deal of overlap had been anticipated, the matching was found to be totally unique in that any single statement of one goal set corresponded to only one statement or set of statements in the other goal set. Table 1 shows the National Assessment reading objectives in partial detail and the corresponding Connecticut goal statements.

DESIGN OF ASSESSMENT PACKAGE

Test Booklet - In November of 1971, National Assessment released to ISIS approximately 220 of the reading exercises which were planned to be officially disclosed to the public in May or June of 1972. At that time ISIS and the Executive Group had agreed that in the interests of maximum comparability, it was desirable that Connecticut's assessment instruments and procedures be as

much like National Assessments as possible. With this in mind, ISIS began the task of designing the assessment package to meet the following criteria:

- National Assessment exercises would be used without change in content or the time allotted for answering each item.
- The total administration time for any package would be fifty minutes or less - in keeping with both National Assessment procedures and normal school period length.
- To the extent possible, items would be selected to represent all of Connecticut's reading goals.
- Items of varying difficulty level would be included in the same proportion as they appeared in National Assessment's release.
- The number of questions per package would be kept in the 19 - 22 range.
- Only those exercises suitable for group administration would be used.

The assessment instruments were developed separately for each age group. The following steps in the development were common for all age groups. The first step was to list all the NA released items, indicating 1) the Connecticut objective, 2) the administration time allotted, 3) the NA ascribed difficulty level, and 4) the item numbers of other NA items which used the same text with different questions (since we would not use two exercises with the same text in one package).

The first information learned from this listing was that all of Connecticut's reading goals were not equally represented in the NA release and that, not unexpectedly, none of the released items tested the goal "Each child develops an interest in, and enjoys reading." (Goal 1.4) Of the four remaining goals, goals No. 1.3 and 1.5 appeared relatively rarely, and goals 1.1 and 1.2 quite frequently. (See Table 1 for goal definitions.)

Accordingly, all released multiple choice items testing goals 1.3 and 1.5 were selected for use, leaving a choice to be made only from those released items representing goals 1.1, and 1.2. A random selection of these were made that yielded approximately 35 minutes of administration time (it had been estimated that approximately 15 minutes of administration time were necessary for instructions). The estimated difficulty levels of all the items selected were then compared with the proportions at which each level appeared in the total NA release. Items were interchanged as required to keep the overall time approximately the same while correcting the proportional distribution of the difficulty level. Lastly, items were rearranged so that there were approximately twenty items in each package. Table 2 summarizes the design of the packages.

Instruction Tape - In order to minimize the effects on student performance of individual administrators, all package administrations were by tape-recorded instructions after an initial verbal introduction by the administrator. This assured commonality of instruction and time between items for all administrations conducted in the State and was in keeping with NA procedures. Figure 1 is the script provided to each administratro for her/his opening introduction, and Figure 2 is the script of the taped instruction heard by all students. Subsequent to the initial instruction, the content of the tape varied according to the time allotted for completion of each test item, and whether or not any additional instructions were required.

Pre-test - Farly in January of 1972, ISIS staff members visited Connecticut for the dual purpose of hiring a field staff and conducting a pre-test of the administration procedures. Some pre-tests were conducted jointly and some individually by both the ISIS staff members and the then just-hired Field Supervisor, at a total of six schools (two at each age level) which were not to be in the final sample, and whose cooperation had been assured through earlier efforts of State Board of Education personnel. The purpose of the pre-test was two-fold: 1) to assure the adequacy of the instructions, oral and taped, in terms of student comprehension, and 2) to provide the background necessary to prepare training instructions for the administrators. As a result of the pre-test, many changes and improvements were made in the administrative procedures which were eventually used during the assessment in March.

TABLE 1

NATIONAL ASSESSMENT READING OBJECTIVES	CONNECTICUT READING OBJECTIVES
*I. COMPREHEND WHAT IS READ	1.1 Each student reads and understands material appropriate for his age and experience.
* A. Read individual words	
* 1. Decode printed words.	
* 2. Comprehend the meanings of words.	
* B. Read phrases, clauses, and sentences.	
* 1. Recognize patterns of words.	
* 2. Comprehend the meanings of phrases, clauses, and sentences.	
* 3. Interpret non-literal and figurative language.	1.2 Each student reads and analyzes material appropriate to his age and experience.
* C. Read paragraphs, passages, and longer words.	
* 1. Find the main point and supporting details in a paragraph.	
* 2. Comprehend the meanings of the main types of paragraphs in fiction and non-fiction.	
* 3. Comprehend the general import of paragraphs, passages, and longer words.	
*II. ANALYZE WHAT IS READ.	1.1 Each student reads and understands material appropriate for his age and experience.
* A. Be able to trace sequences.	
1. Retell a story with the events in proper order.	
2. Follow the development of an author's idea.	
* 3. See the steps in a process.	

*Indicates those objectives tested by exercises used in Connecticut Reading Assessment

TABLE 1 (CONT'D)

NATIONAL ASSESSMENT READING OBJECTIVES	CONNECTICUT READING OBJECTIVES
* B. Perceive the structure and organization of the work.	1.2 Each student reads and analyzes material appropriate to his age and experience.
* 1. Grasp the overall design.	
2. Recognize large thought divisions within the work.	
3. See the devices used to provide transitions between the various parts of a work or to connect the various parts.	
* C. See the techniques by which the author has created his effects.	
* 1. Understand the author's manner of using language to convey and interpret information and emotional colorations.	
* 2. Perceive as exactly as possible the nature and purpose of the author's tone or mood.	
* 3. Discern the dynamics of literary style.	
*III. USE WHAT IS READ.	1.1 Each student reads and understands material appropriate for his age and experience.
* A. Remember significant parts of what is read.	
1. Remember the main idea in a piece of exposition and the theme or dominant impression of a descriptive or narrative passage.	
* 2. Remember pertinent details.	
3. Remember the patterns into which the details fit.	
* B. Follow written directions.	
1. Connect what is read with things in the world.	
* 2. Follow directions correctly.	

TABLE 1 (CONT'D)

NATIONAL ASSESSMENT READING OBJECTIVES	CONNECTICUT READING OBJECTIVES
* C. Obtain information efficiently.	1.5 Each student locates and uses printed information essential for the decisions he has to make.
* 1. Skim a paragraph or passage.	
* 2. Use the various parts of a book as aids in finding what is needed.	
* 3. Find information efficiently in a variety of reference tools.	
* 4. Obtain information from "non-textual" sources.	
*IV. REASON LOGICALLY FROM WHAT IS READ.	1.2 Each student reads and analyzes material appropriate to his age and experience.
* A. Draw appropriate inferences from material that is read and "read between the lines" where necessary.	
1. Anticipate outcomes.	
2. Infer causes from a perusal of the effects.	
3. Supply missing elements (such as words, ideas, or steps) in a passage that is not as well written as possible.	
B. Arrive at a general principle after examining a series of details.	
1. Select instances or examples that are relevant to the main point.	
2. Determine what general principle is illustrated by a set of examples.	
3. Explain exceptions to the general principle.	
C. Reason from a general principle to specific instances.	
1. Find out what the general principle is.	

TABLE 1 (CONT'D)

NATIONAL ASSESSMENT READING OBJECTIVES	CONNECTICUT READING OBJECTIVES
2. Identify other principles that are involved. 3. Arrive at an appropriate conclusion or an example of the rules.	1.2 Each student reads and analyzes material appropriate to his age and experience.
*V. MAKE JUDGMENTS CONCERNING WHAT IS READ.	1.3 Each student makes judgments concerning what hs has read appropriate to his age and experience.
A. Relate what is read to things other than the specific material being read.	
1. Relate reading to life.	
2. Relate reading to other reading done.	
* B. Find and use appropriate criteria in making judgments about what is read.	
1. Base some judgments on information about the author.	
* 2. Judge the validity of the facts presented.	
3. Judge the acceptability of the author's assumptions.	
* C. Make judgments about a work on the basis of what is found in the work itself.	
* 1. Differentiate between fact and opinion.	
2. Determine how valid the author's arguments are in relation to the point to be made.	
* 3. Recognize internal consistency or the lack of it.	
* 4. Detect false or specious logic.	

TABLE 1 (CONT'D)

NATIONAL ASSESSMENT READING OBJECTIVES	CONNECTICUT READING OBJECTIVES
VI. HAVE ATTITUDES ABOUT AN INTEREST IN READING.	1.4 Each student develops an interest in, and enjoys, reading.
A. Depth of Interest in Reading	
1. Is willing to read.	
2. Occasionally shows a preference for reading.	
3. Seeks out additional similar reading materials.	
B. Motives for Reading	
1. Reads from habit or compulsion, or because reading is assigned or otherwise required of him.	
2. Reads because of status or prestige which is acquired among his peers or teachers.	
3. Reads for diversion.	
4. Reads for information.	
5. Reads for reinforcement and assurance.	
6. Reads for philosophic or esthetic pleasure.	
C. Quantitative Measures for Reading Interest	
1. Time allotted to reading.	
2. Availability of resources and places to read.	
3. How much does the student read? What kinds of material does he read?	

TABLE 2

SUMMARY OF PACKAGE DESIGN

AGE	NO. OF ITEMS	ADMIN. TIME	NO. OF ITEMS* PER OBJECTIVE				NO. OF ITEMS PER DIFFICULTY LEVEL			
			1.1	1.2	1.3	1.5	90	50	10	UNK
9	21	33.5	9	9	1	4	6	9	5	1
13	21	32.5	7	9	2	7	7	9	4	1
17	21	34.5	7	11	1	5	7	9	3	2

*Several items represented more than one objective.

FIGURE 1

ADMINISTRATOR'S INTRODUCTION

(GOOD MORNING) (GOOD AFTERNOON)

PLEASE CLEAR YOUR DESKS OF ALL MATERIALS OTHER THAN THE BOOKLET AND THE PENCIL.

THE QUESTIONS YOU ARE ABOUT TO ANSWER ARE NOT A "TEST" IN ANY SENSE OF THE WORD. NO GRADES WILL BE GIVEN AND YOUR NAME WILL NOT BE PUT ON THE BOOKLET. NO ONE IN THIS SCHOOL WILL EVER SEE YOUR BOOKLET, OR KNOW HOW YOU DID. WE ARE ONLY INTERESTED IN WHAT YOU THINK THE CORRECT ANSWERS ARE AND NOT IN ANYTHING ELSE.

THE COVER PAGE OF YOUR EXERCISE BOOKLET SHOULD HAVE THE WORDS AGE GROUP ___ (select appropriate group number - 1, 2, or 3) PLEASE CHECK TO BE SURE THAT YOURS IS CORRECT.

NOW, IN THE LOWER RIGHT HAND CORNER OF THE COVER PAGE PLEASE WRITE THIS FIVE DIGIT NUMBER: __ __ __ __ __. (read appropriate number and hold up card).

NOW WRITE THE NUMBER (1,2,3, or 4 - Administration no.) AT THE END OF THE 5 DIGIT NUMBER YOU JUST WROTE. FOLLOWING THE LAST DIGIT OF THE NUMBER YOU HAVE JUST WRITTEN WRITE THE LETTER M IF YOU ARE A MALE (BOY) OR AN F IF YOU ARE A FEMALE (GIRL).

— — — — — — —

1 2 3

1 = 5 digit school number
2 = 1 digit administration number
3 = 1 letter sex code

EVERYONE SHOULD NOW HAVE SIX NUMBERS AND ONE LETTER ON THE COVER OF THEIR BOOKLET. (pause to be sure that everyone does)

FIGURE 1 (CONT'D)

IN A MOMENT I AM GOING TO TURN ON A TAPE RECORDER AND ON THAT TAPE YOU WILL HEAR INSTRUCTIONS FOR WHAT WE WANT YOU TO DO. LISTEN TO THE INSTRUCTIONS VERY CAREFULLY. ONCE THE RECORDING STARTS, I CANNOT ANSWER ANY QUESTIONS REGARDING THE TEST. IF YOU NEED ANOTHER PENCIL, OR YOU THINK THAT SOMETHING IS WRONG WITH YOUR BOOKLET PLEASE RAISE YOUR HAND AND I WILL ASSIST YOU.

DURING THE TEST LEAVE YOUR BOOKLET IN A FLAT, OPEN POSITION ON YOUR DESK: YOU DO NOT HAVE TO FOLD THE PAGES UNDER EACH OTHER. (demonstrate to students) YOU WILL NOT BE PERMITTED TO TURN THE PAGES BACK: THE TAPE AND INSTRUCTION BOOKLET WILL TELL YOU WHEN TO STOP AND WHEN TO GO ON.

IF EVERYONE IS READY, I WILL TURN ON THE TAPE RECORDER. (turn on the tape recorder)

FIGURE 2

TAPED INTRODUCTION

You have been chosen to take part in a statewide study of students your age. The purpose of this study is to give people who are interested in education some information about the knowledge, skills and attitudes of young people from all over Connecticut. With this information they can find out what progress this state is making in reaching its educational goals. You should do the very best you can so that the people who are doing the study can get accurate information about people your age. Your name will not be on any materials leaving the school, and your answers will not be shown to anyone in your school. The directions for what you are to do are printed in the package booklet. I will also read them to you. It is important that you follow the directions very carefully so that you will understand how to mark your answers. Put your answers only in the answer spaces. If you need to do any figuring, you may use the blank space on each page.

Now look at Page 3 of the booklet. On this page is a sample exercise to show you how to mark your answers. First, let us read the directions together. You read them to yourself as I read them aloud.

III. SAMPLE DESIGN

APPROACH

The assessment process was based on selecting a sample of students and presenting each with a series of exercises to assess his or her specific reading performance. The use of a probability sample instead of a 100 percent census follows accepted procedures in government, business, industry, and basic science. This is also the method used by National Assessment in developing the National and Northeast data shown for comparative purposes in the Results Section (VI). After all, you don't have to drink an entire pot of soup to tell how salty it is; a few sample sips are enough.

The students selected for the Reading Assessment were a random sample of 9, 13, and 17 year olds attending the Connecticut public schools and the State Vocational Technical Schools listed in the two Connecticut Directories[1] during February and March, 1972. The sample design was a four stage systematic random sample. The first stage was by size of community (SOC): 1. Big Cities; 2. Fringe Cities; 3. Medium Cities; 4. Smaller Cities. The second stage was by school district, with each district in a given SOC category having a selection probability proportional to its school enrollment. The thirt stage required selecting three schools in each selected district, one for each age level. The probability of a school being selected was proportional to its estimated number of pupils at the selected age level. The fourth stage was the selection of the specific children to participate. They were selected at random within each school. The resulting sample quotas are shown on the next page.

Because of the requirement of administering the assessment procedure to groups of 12 students at a time, and because a single school could provide time and facilities for four administrations a day, the required number of eligibles in any school (or combination of very small schools) was 48. To allow for absentees and a margin for safety, the required number of eligibles at each age level was set to 60. Using 48 students as the quota for each sampling point, 48 sampling

---

[1]Connecticut Elementary and Middle School Directory, 1971-1972. Connecticut Junior and Senior High Schools Directory, 1971-1972.

points were needed to assure adequate sample size for each assessment package. (NA suggests a minimum of 2000 respondents/ package.)

RESPONDENT QUOTA BY SOC CATEGORY

Age	Large	Fringe	Med.	Small	Total
9	480	576	624	624	2304
13	480	576	624	624	2304
17	480	576	624	624	2304
Total	1440	1726	1872	1872	6912

DEFINITIONS

SOC

Big Cities (1) - All towns with a population greater than 100,000.

Fringe Cities (2) - Towns whose borders are contiguous with Big Cities and whose population is greater than 10,000.

Medium Cities (3) - Towns with population greater than 25,000 which are not Bit Cities or Fringe Cities.

Smaller Places (4) - All other towns.

If we had used National Assessment definitions for these categories, we would not have had any Big Cities or Fringe Cities in Connecticut, and cities classified as Medium would have accounted for 87% of the total state population. For comparison purposes, the NA results are shown along with Connecticut results applying the NA definitions of SOC to the Connecticut

data as well as using the definitions shown here. See Section VI.

Age - A 9 year old was defined as a student who was born between 1/1/62 and 12/31/62. A 13 year old was a student who was born between 1/1/58 and 12/31/58. A 17 year old was a student who was born between 1/1/54 and 12/31/54. These definitions were arrived at after consideration of both National Assessment definitions and the Connecticut testing dates, so that the Connecticut results would be as comparable as possible with National Assessment results.

School District - A school district was defined as listed in the directories, except that where the directories showed consolidated districts for a high school,those districts were considered to be consolidated for all schools. Thus, every "district" had schools covering K - 12. In those cases where the number of estimated eligibiles in the district at any age was less than 60, the district was combined (based on geographical closeness and socio-economic homogeneity) with one or more other districts to provide an adequate size sampling unit.

Enrollment - The lists used to define the sampling universe contained the grade spread of each school and its total enrollment. The number of 9 year olds in the district was estimated by multiplying the district enrollment by 0.07759, which is the ratio of state-wide 9 year old enrollment in grades 3, 4, or 5 to total enrollment (from 1968 data, the latest available). The number of 13 year olds and 17 year olds were similarly estimated from the age/grade data.

Eligible - At each age level, only those students who were in the appropriate grade for that age, or one grade ahead or one grade behind were sampled. After adjusting for the definition of age these grades are listed below with the percentages of all pupils of that age (from 1968) shown.

Age	Grade levels	Percent of Total
9	3, 4, 5	7.75909
13	7, 8, 9	6.86240
17	11, 12	4.44797
		19.06942

SAMPLING PROCEDURES

At each sampling level (Stratum, District, School, Student) a systematic random sample procedure was used. Within each District selected, one school was independently selected for each of the three age levels. Sometimes this led to the same school being selected for the 17 year old sample as for the 13 year old sample because the same school had both ages in it.

If a given school had less than 60 estimated eligibles, it was combined with another small school from the same district for sampling purposes. This procedure was done separately for each age group.

At each selected school the names of all eligible students were listed from school records. These names were recorded on previously prepared listing sheets (See Section IV for a sample) which were designed to be overlayed by computer printout (line spacing was the same). There were twenty lines to a sheet. The number of eligibles and the quota were used as input to a computer program that produced strips of output, each strip 20 items long. These were then pasted on the listing sheet so that a single symbol appeared next to each name on the sheet. The symbol was either a YES, 1, 2, 3, 4, or -; all symbols were assigned randomly by the computer program.

If the quota was 60 (the usual case) there were 60 "YES" codes randomly listed among the total of N items (where N is the number of total eligibiles at a given age in a given school). There were 15 "1" codes; 15 "2" codes; 15 "3" codes; and 15 "4" codes, also randomly assigned. The remaining output codes were all "-." The students with "YES" were selected first; if there were not enough of them in school on the assessment day, then some or all of the 15 students with code "1" were called. This procedure was continued until the quota was met. On the administration day the first 15 students listed who were available were chosen for the first administration, the next 15 for the second administration, etc. The administrator went as far down the list as needed to fill the quota. In the few cases where a school could not be used (under construction, school no longer in operation, etc.) a nearby school in the same district was substituted.

PROBABILITY CALCULATIONS

Let N_i = Number of eligibles in the $i^{\underline{th}}$ stratum.

N_{ij} = Number of eligibles in the $j^{\underline{th}}$ district in the $i^{\underline{th}}$ stratum.

N_{ijk} = Number of eligibles in the $k^{\underline{th}}$ school in the $j^{\underline{th}}$ district in the $i^{\underline{th}}$ stratum.

The quota of districts for the $i^{\underline{th}}$ stratum (Q_i) is

$$Q_i = 48(N_i/\sum_i N_i)$$

This led to quotas of 10, 12, 13, and 13 districts for Large, Fringe, Medium, and Small Strata, respectively.

The probability of a district being chosen within a stratum is

$$P_j = Q_i (N_{ij} / \sum_j N_{ij})$$

To determine the probability of a school being chosen A_{ij} was defined as the number of 9 year old eligibles in the j^{th} district in the i^{th} stratum, and A_{ijk} as the number of 9 year old eligibles in the k^{th} school in the j^{th} district in the i^{th} stratum. Similarly B refers to the 13 year olds, and C to the 17 year olds.

Thus, $A_{ijk} + B_{ijk} = C_{ijk} = N_{ijk}$

Then the probability of the k^{th} school being chosen, given that its district (j) has been chosen, is

$$P_k = A_{ijk} / \sum_k A_{ijk}$$

The probability of any given 9 year old being chosen, given that his school is chosen, is

$$P_c = 48/A_{ijk}$$

These probabilities can now be combined into a single statement for the child:

$$P_c = (N_i / \sum_i N_i)(48)(N_{ij} / \sum_j N_{ij})(A_{ijk} / \sum_k A_{ijk})(48/A_{ijk})$$

Since $\sum_j N_{ij} = N_i$, and $\sum_k A_{ijk} = N_{ij}/3$, this expression can be reduced to $P_c = 3 \cdot 48 \cdot 48/N = 0.058$

Where N is the total number of eligible students in Connecticut;

This is the probability of a random eligible being selected for the sample. In actual practice, the number of 9, 13, or 17 year olds in any school or district is unknown, but it was estimated from 1968 age/grade data.

All of the variables in the probability equations are estimates except A_{ijk} which was actually counted from the school records. A correction factor is therefore introduced as a weight at the individual school level. Instead of a weight of 1.00, an adjustment for the difference between actual values and estimates was used. This weighting method is described and illustrated in Section V; its effect is to derive unbiased estimates of the true scores by accounting for the effect introduced by having slightly different probabilities for different children because the actual number of eligibles was not exactly the same as the estimated number.

DESCRIPTION OF FINAL SAMPLE

After all the data were collected, and analysed, the final composition of the sample in terms of districts, schools, and students was as shown in Table 3.

The five districts shown as comprising SOC 1 are all five of Connecticut's large cities and therefore constitute a 100% sample of that stratum. The strata were not all of equal size, in terms of number of districts, number of schools, or number of students. The samples of strata (SOC's) reflect these size differences, and are not equal, but are in proportion to the size of their strata.

TABLE 3

SAMPLE COMPOSITION

Number of:	All SOC's Combined	SIZE OF COMMUNITY SOC 1	SOC 2	SOC 3	SOC 4
		TOTAL SAMPLE			
Districts	48	5	13	13	17
Schools*	163	32	41	43	47
Students	7751**	1509**	1926	2031	2282
Boys	3882	717	966	1066	1133
Girls	3866	792	960	965	1149
		AGE GROUP I - 9 YEAR OLDS			
Districts	43	5	12	13	13
Schools	68	14	17	16	21
Students	2706**	524**	690	743	749
Boys	1345	265	330	349	401
Girls	1360	258	360	394	348
		AGE GROUP II - 13 YEAR OLDS			
Districts	43	5	12	11	15
Schools	49	9	12	12	16
Students	2707**	524**	682	629	872
Boys	1346	243	356	332	415
Girls	1359	279	326	297	457
		AGE GROUP III - 17 YEAR OLDS			
Districts	43	5	12	13	13
Schools	50	9	12	15	14
Students	2338	464	554	659	661
Boys	1191	209	280	385	317
Girls	1147	255	274	274	344

*The total number of schools is 4 less than the sum of the number of schools shown for the separate ages because 4 schools were selected as samples for two age groups.
**This count includes some respondents whose sex is not known.

IV. ADMINISTRATION

RECRUITING AND TRAINING OF ADMINISTRATORS

Selection of Administrators and Supervisor - Prior to obtaining applicants for the position of administrator certain basic qualifications and criteria were extablished by ISIS. Sepcifically, they were:

- teaching experience on an elementary or secondary school level
- availability for a period of approximately 9 weeks employment
- dependable means of transportation
- ability to work effectively with school administrators
- proximity to the school districts included in the sample

With these qualifications in mind, it was decided that the administrators and supervisor should be either retired teachers or principals, or substitute teachers.
By contacting several superintendents and other knowledgeable educational professionals, a list of candidates, several times as long as the number of positions to be filled was generated.

The candidates' home addresses were then located on a Connecticut map and compared with the sample of districts chosen for assessment. The candidates were then grouped as to their potential assignments and then evaluated for selection.

In all cases, candidates for the positions were requested to send their professional resumes to ISIS. After reviewing the resumes and discussing the project with the individuals by phone a list of prospective administrators to be personally interviewed were compiled. Two ISIS staff members traveled to Connecticut and conducted the screening interviews for administrators and, at the same time selected one of the applicants

for the position of Supervisor of Administrators. This interviewing was conducted during the same week that the pretests of assessment procedures were conducted in Connecticut schools.

After final interviewing and screening, ten administrators were selected. In addition, one substitute administrator was selected to be trained in the administration procedures and to serve as a back-up in the event that any of the administrators were unable to complete the job.

Training of Administrators - In order to achieve maximum effectiveness the training program for field administrators was divided into two sessions coinciding with the two phases of assessment operations:

- Training Session I was held on January 24, 1972 and included a general overview of the program as well as specific training in the tasks to be performed in Phase I: planning session with school officials, scheduling, selection of testing facility, use of student listing forms, etc.

- Training Session II was held on February 24, 1972 and consisted of detailed training in the actual student assessment procedures to be used in Phase II: administration of assessment tests, coding of booklets and preparation of coding transfer forms.

Both training sessions were held at a suburban New Haven conference facility and were conducted by ISIS personnel. In addition to the field supervisor, administrators, and ISIS staff members, officials of the State Department of Education were present at both sessions.

SOLICITATION OF SCHOOL COOPERATION

To insure maximum cooperation from the schools chosen for the assessment, several means of communication with school personnel were employed. Six weeks prior to the administrator's first visit a letter was sent to all Superintendents of schools selected for the sample. In this letter, the assessment program was explained and superintendents were told that one or more schools in their district was included in the sample.

Enclosures with the letter included: (See Figure 3)

1) a letter from Dr. Sanders requesting cooperation on behalf of the State Board;

2) a copy of the operational memo which was later sent to school principals;

3) a booklet explaining National Assessment; and

4) the names of the schools in the superintendent's district which had been selected for the sample.

Two weeks following this mailing to superintendents a similar mailing was sent to the principals of the schools to be included in the sample, including a letter explaining the program and soliciting their cooperation, in addition to all materials previously sent to the superintendents. Detailed explanations and instructions regarding the assessment process were also sent to the school principals. (See Figure 4).

The second contact with the school officials took place when the ISIS Connecticut Field Supervisor telephoned the principal of each of the schools to be included in the program. The primary purpose of this call was to schedule appointments between the administrators and principals to discuss the details of the assessment procedure for each school. A secondary purpose of the supervisor's call was to verify the principal's knowledge of and cooperation with the assessment program thereby laying the groundwork for the administrator's initial visit. This telephone communication with principals proved to be an extremely valuable step in the assessment procedure enabling many potential problems and conflicts to be avoided early.

Cooperation offered by the school principals was in most instances extremely gratifying. While a few school officials found it difficult for their schools to cooperate in the program the majority were enthusiastic about being included in the program sample and were eager to be of assistance.

SCHEDULING

The assignment of administrators to schools was done primarily on the basis of geographic proximity so as to reduce excessive traveling time to and from the schools.

While the initial appointments were scheduled by their Supervisor, administrators were responsible for the scheduling of the actual school assessments. Guidelines for this scheduling were given by ISIS during Phase I of the training program.

The schedule of dates and times for all assessments were compiled by ISIS into a Master Assessment Schedule and administrators were responsible for apprising their supervisor of any changes made.

ADMINISTRATION OF ASSESSMENT

Phase I: Initial School Visits - (Jan. 25 - Feb. 18th) - During this first phase of the assessment program the administrators visited each of their assigned schools and discussed the details of the assessment program with the principal of the school and/or a member of his staff who he may have assigned as a program coordinator. At this meeting the following tasks were discussed and completed:

A. Description of Assessment Program

All principals had previously received printed material concerning the program and had discussed the program with the supervisor. In addition to this however, administrators reviewed the program with the principals and answered any questions that they might have had.

B. Receipt of Completed Listing Sheets (Student Rosters of 9, 13 and/or 17 year olds)

Included in the package of materials which principals received in January were several student listing forms and directions for filling them out. (This form is included in Figure 4). These forms were later used in the ISIS

student sampling procedure. The forms were to have been completed prior to the administrator's arrival and they were collected and verified during the visit.

C. Selection of Date and Time for the Reading Assessment - The administrator and principal determined a mutually convenient time and date for the reading assessment.

D. Determined Method to be Used for Taking Students from Classes on the day of the Assessment - Techniques for notifying and securing students were decided upon.

E. Examined Testing Room - Facilities were examined to insure that the testing room was suitable for testing and that proper student seating and electrical outlets for the tape player were available.

Throughout Phase I of the Assessment Procedure administrators were required to make weekly reports by telephone to the Connecticut supervisor informing him of all pertinent information, decisions, and problems which may have occurred.

Phase II: The Reading Assessment - At the scheduled time for the school's Reading Assessment, administrators performed the following administration tasks:

A. Explained Student Selection Procedure to School Principal, Coordinator and/or Office Staff.

As school staff was responsible for the actual operation of obtaining students from classes, it was necessary that they fully understand the student selection procedure including the codes used on the student listing sheet. To obtain the required number of students for each assessment there was a "primary" sample as well as up to eight "backup" samples of students. To select students the office staff was to draw names first from the primary sample. When all names from that sample were exhausted they were instructed to use the secondary sample, etc.

B. Administer Assessment Procedure

Assessment procedure in the classroom consisted of the following tasks:

1. Distribute test materials to each student.

2. Read introductory statement to students (copy is shown in Figure 1).

3. Turn on tape recorder - (the tape recording contained all test administration instructions and thus "conducted" the testing without the further aid of the administrator).

4. At the end of the tape the administrator turned the tape recorder off, collected the booklets and dismissed the students.

CODING

In order to facilitate the computer analysis of all the Reading Assessment data, it was necessary to record the data in a form convenient for keypunching. This was accomplished through the use of a specially designed "Transfer Form" reproduced as Figure 5. Detailed instructions for filling out these forms were given to the administrators and they were asked to complete them and return them to ISIS at the end of each day's administrations. This was also the basis for control of the administration schedule.

A single administration (8-15 children, a single age group, at a particular school) was recorded on each transfer form. Each line of the transfer form represented a test booklet submitted by one child, and each entry on the form (in columns 11-46) represented a student's answer to an individual exercise or exercise part. The numbers recorded in each box were the numbers of the answers selected by each child;

additionally if the child recorded "I don't know" it was coded "9", and if a question was unanswered, it was coded "0". Columns 1-10 were used to indicate AGE (Col. 1), SCHOOL (Col. 2-6), ADMINISTRATION NO. (Col. 7), SEX OF RESPONDENT (Col. 8), and RESPONDENT NO. (Col. 9, 10).

During the middle of the administration a check was made of the administrator's coding accuracy. Each administrator was asked to resubmit a transfer form for a particular administration. The resubmitted form was manually checked against the previously submitted form for the same administration for discrepancies. The maximum discrepancy rate found in this manner was 1.54% (average was 0.46%). Assuming that the discrepancy rate was twice the error rate, (spot checking indicated that this assumption was valid) indicated a maximum error rate of only 0.77% which was considered adequate and all data were accepted as submitted. Further checks were made of coding accuracy which will be described in Section V - ANALYSIS METHODS.

FIGURE 3

MAILING TO SUPERINTENDENTS

The following pages (32 through 36) include all the materials sen to district superintendents.

ISIS

INSTITUTE FOR THE STUDY OF INQUIRING SYSTEMS

3508 MARKET STREET PHILADELPHIA, PA. 19104 (215) 386-2186

We are writing to request your cooperation in a program to assess the educational programs of Connecticut Public Schools. We have been retained by the State Department of Education to conduct the first two steps in that program - an assessment of reading skills, and a determination of public judgement of the goals of Connecticut education.

The objective of the reading assessment is to compare information about the reading skills of Connecticut students to similar information garnered nationwide by the National Assessment of Educational Progress. To that end the exercises to be used in the assessment are identical with those used by National Assessment and are based upon commonly accepted educational objectives.

Your school district is one of the districts randomly selected to take part in the study. The data collected will be reported only in broad categories, and will in no way identify individual students, schools, or school districts. The assessment will be conducted by our own staff; none of your personnel will be asked to administer the exercises.

In order to carry out the second part of the program, the public response to Connecticut educational goals, our administrators will supply forms to be distributed to staff and students in the selected schools. The student forms are to be carried home, filled out by parents and returned to us in prepaid envelopes.

We have enclosed a folder containing additional information about the program. The folder includes an introductory letter from Commissioner Sanders, more detailed information about National Assessment, a memo detailing our activities, and a list of the schools in your district selected for participation.

We are looking forward to your support of the program and to visiting schools in your district.

Sincerely,

George A. Kaufmann
Project Coordinator

GAK:ldw

Enclosure

STATE OF CONNECTICUT
STATE BOARD OF EDUCATION
P.O. Box 2219 • Hartford, Connecticut 06115

566-5061

Dear Superintendent or Principal:

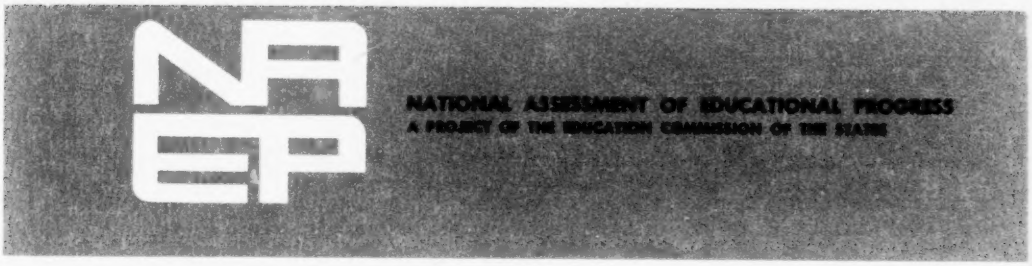
As you probably know, the Connecticut State Board of Education is conducting an educational assessment program in Connecticut. As the first step of that program, the Board has retained The Institute for the Study of Inquiring Systems in Philadelphia to administer a reading assessment package in approximately 150 randomly selected schools throughout our state. Although the tests will be given to individual students, the results will not be identifiable by student, school, or district. Data obtained will give both an overview of the reading status of all 9, 13, and 17 year old students and information about them classified according to the size of their communities. The procedures are consistent with the methods used by the National Assessment of Educational Progress. The enclosed materials explain exactly how the program works and the nature of the cooperation expected.

Your participation in this very important project is most essential to the continued improvement of Connecticut education.

Sincerely yours,

William J. Sanders
Secretary
State Board of Education

WJS:fmc
enc.



Questions and Answers about the National Assessment of Educational Progress

1. What is the National Assessment of Educational Progress?

It is a national, census-like survey of the knowledge, skills, understandings, and attitudes of certain groups of young Americans.

2. What are the goals of National Assessment?

The two major goals are:

1. To make available the first census-like data on the educational attainments of young Americans.
2. To measure any growth or decline which takes place in selected aspects of the educational attainments of young Americans in certain subject areas.

3. Why is such an assessment necessary?

Every year billions of dollars are spent on education in the United States—on buildings, on teachers' salaries, on curriculum planning—but very little is known about the effectiveness of this expenditure. The purpose of National Assessment is to gather data that will help answer the question, "how much good is the expenditure of so much money doing, in terms of what Americans know and can do?"

4. Does this mean you're gathering data on specific school districts that will allow you to compare the effectiveness of different schools and districts?

No, the sample is not drawn in such a way that we can make any statements about individual schools, districts, or even states. The smallest area we can talk about is a geographic region. For National Assessment purposes, the country is divided into four regions—Northeast, Southeast, Central, and West.

5. How is National Assessment financed?

The project has received funds from three different sources since it began in 1964—the Carnegie Corporation of New York, the Ford Foundation's Fund for the Advancement of Education, and the U.S. Office of Education. Since 1968, major funding has been provided by the National Center for Educational Research and Development of the U.S. Office of Education.

6. How does the assessment gather data to determine the educational attainments of Americans?

First, it is necessary to determine what the educational system is trying to achieve. These objectives are identified through the efforts of both school and lay people, and are to meet three basic criteria. These are that they must be:

1. considered important by scholars,
2. accepted as educational tasks by the schools, and
3. considered desirable by thoughtful lay citizens.

Second, questions and tasks, called exercises in National Assessment's terminology, are written to determine how well these objectives are being achieved.

Third, the exercises are administered to people selected through random sampling procedures throughout the country.

7. Who is in charge of the assessment?

The Education Commission of the States (ECS) is National Assessment's governing organization. ECS is presently composed of representatives of 43 states and territories whose purpose is to discuss mutual educational problems and to act together to achieve educational goals. Since its membership includes governors, chief state school officers, legislators, and lay people, ECS serves to make National Assessment legally responsible to the public.

8. Who makes the policy decisions about the project?

The Steering Committee of ECS is the ultimate policy-making group. It meets three times a year. In addition, a National Assessment Policy Committee meets every six to eight weeks to handle the month-to-month policy questions. Members include people working directly in the field of education and nonprofessionals concerned about education.

9. Who heads the National Assessment Policy Committee?

James A. Hazlett, former superintendent of schools in Kansas City, Missouri, is chairman of the National Assessment Policy Committee. He is also the administrative director of NAEP.

10. Is the ECS staff in charge of conducting the work of the assessment?

No. ECS provides general direction for the project, but a separate NAEP staff handles the day-to-day work of the assessment.

11. Who is the NAEP staff director?

J. Stanley Ahmann, formerly professor of psychology at Colorado State University, succeeded Frank B. Womer as staff director on July 1, 1971.

12. Where is the National Assessment staff located?

Both National Assessment and the Education Commission of the States are located in Denver, Colorado. The address is:

300 Lincoln Tower
1860 Lincoln Street
Denver, Colorado 80203

13. When did the assessment begin?

Project planning began in 1964, when the Exploratory Committee on Assessing the Progress of Education (ECAPE) was established with Carnegie Corporation funds to investigate the possibilities of a national assessment, and to develop a plan and instrumentation for its conduct. The work of ECAPE resulted in the design currently followed by NAEP. Actual administration of National Assessment exercises in the schools began in the spring of 1969.

14. Does the National Assessment staff administer the exercises?

No, field work is done by the Research Triangle Institute (RTI) of Raleigh, North Carolina, which works under contract with the Education Commission of the States. RTI conducts the assessment in the Northeast and Southeast regions, and subcontracts the assessment in the Central and West regions to the Measurement Research Center of Iowa City, Iowa.

15. Who are the people asked to respond to the exercises?

Four age groups are being sampled—9s, 13s, 17s, and young adults between the ages of 26 and 35.

16. How are the people chosen to participate in the assessment?

Using random sampling procedures similar to those used in public opinion polling, NAEP selects people for the assessment and then seeks their cooperation.

17. How many people participate?

The numbers of people asked to cooperate vary from year to year, depending on the number of subject areas being assessed during a given year. In order to make reliable statements about National Assessment results, approximately 2,000 responses are required for each exercise. National Assessment exercises are administered in such a way that no one individual takes all the exercises (this could require one person to spend as long as 14 hours to complete the entire set of exercises), but only a portion of the exercises. A large number of respondents is required before all exercises have been answered by about 2,000 people.

In the first year of data-gathering, when science, writing, and citizenship were assessed, approximately 90,000 people participated—about 25,000 9-year-olds; about 28,000 at each of ages 13 and 17; and about 9,000 young adults. The number of respondents will vary slightly from year to year, but each assessment will include about 80,000 participants.

18. How are these people assessed?

Students in school are assessed in a group situation or, in some cases, in individual interviews. Paper-and-pencil questions, discussions, and actual tasks to perform are included among the exercises.

Adults are interviewed individually in their homes, and out-of-school 17-year-olds also respond to exercises individually.

19. Does administration of exercises in the school mean that students, teachers, and administrators must take much time from their classes?

Only about 50 minutes are required for a student to respond to the exercises, so he misses no more than a single class period. All exercises are administered by people employed by the Research Triangle Institute or the Measurement Research Center, so no teacher or administrator time is required for that purpose. School personnel are asked to provide a list of their students in the age group being assessed, to be used in randomly selecting individuals to participate, and they are asked to provide space for the assessment and to help locate students in the sample. Otherwise, no school time is necessary.

20. You say that schools provide a list of the students in the age group being assessed. Does this mean that individuals who participate in the assessment are identified by name?

No, the list of names is necessary only for the purpose of selecting, through random sampling procedures, the people who will participate. But the names of participants do not appear on any exercises, and NAEP ensures the anonymity of the respondents.

21. What are the subject areas included in the assessment?

Ten subject areas were chosen for assessment: citizenship, science, writing, music, mathematics, literature, social studies, reading, art, and career and occupational development. Other areas may be added in the future.

A2

22. Are all these areas being assessed during the 1971-72 year?

No. Two subject areas are being assessed this year — music and social studies. The assessment plan is:

Cycle 1

March 1969—February 1970 Science, Writing, Citizenship
October 1970—August 1971 Reading, Literature
October 1971—August 1972 Music, Social Studies
October 1972—August 1973 Math, Science, Career and Occupational Development (COD)
October 1973—August 1974 Reading, Writing
October 1974—August 1975 Citizenship, Art

Cycle 2

October 1975—August 1976 Math, Science
October 1976—August 1977 Reading, Literature
October 1977—August 1978 Music, Social Studies
October 1978—August 1979 Math, Science, COD
October 1979—August 1980 Reading, Writing
October 1980—August 1981 Citizenship, Art

The repeated assessments of subject areas will allow comparisons to show whether change has occurred.

23. How will results be reported?

About 50 percent of the actual exercises given each year will be reported, along with the percentage of people giving various responses, both correct and incorrect. The remaining exercises will not be reported until they have been used again when a subject is reassessed in future years.

Results will be reported nationally—for example, the percentage of all 9-year-olds who responded correctly—for each exercise and each age. In addition, results will be given for other categories:

1. Geographic region—Northeast, Southeast, Central, and West;
2. Size of community—big cities, urban fringes, medium-size cities, and smaller (less populated) places;
3. Type of community—impoverished inner cities, affluent suburbs, and rural areas;
4. Sex;
5. Color—black, nonblack, and total;
6. Socioeducational background. (How this is to be defined is still an operational problem. For 17-year-olds, the educational level of the parent who received the greatest amount of education is being used as an index of educational background.)

24. When will results be reported?

The first reports, which describe national results for science and part of citizenship, were made at the annual convention of ECS in Denver in July, 1970. In November, 1970, the remainder of national citizenship and complete national writing results were reported. The first group reports—including geographic region, size of community, and sex results for science and writing—were released in April, 1971. Additional reports will be made periodically in the future.

25. Who will get the results?

The following reports are available:

Science National Results—$1.75
Science National Summary—$0.35
Science National Commentary—$0.50
Citizenship National Results—$1.25
Citizenship National Commentary—$0.40
Writing National Results—$1.50

(Each commentary includes the reactions of five subject matter specialists asked to review NAEP's results.)

Requests for these and forthcoming reports should be directed to:

Superintendent of Documents
U.S. Government Printing Office
Washington, D.C. 20402

(School districts and individual schools cooperating in National Assessment receive free copies of the reports about the assessment in which they participate.)

ISIS

INSTITUTE FOR THE STUDY OF INQUIRING SYSTEMS

3508 MARKET STREET PHILADELPHIA, PA. 19104 (215) 386-2186

MEMO TO SCHOOL PRINCIPALS

During the month of March, 1972, we will assess the reading skills of 9-year-old, 13-year-old, and 17-year-old students in selected schools throughout the State. We plan to meet with you in January, at which time we will discuss the details of our assessment, including schedules, number of students to be assessed, and the length of time we will be in your school.

All selected students will be assessed in their own school, in groups of 12-15 at a time. Each selected student will be assessed only once for approximately one hour. The identity of the selected students, as well as that of the school and school district, is confidential and will not be revealed in any of the assessment reports.

Your school has been selected by a random sampling procedure from all public schools throughout Connecticut. Our activities in all the schools selected will have as their objectives, 1) the random selection of students for assessment, 2) the administration of exercises to those selected students, and 3) the distribution of forms for the determination of public response to Connecticut educational goals. We have defined field procedures to meet these objectives which we hope will cause minimal interference with your routines.

Listed below are several tasks which are necessary if the program is to be successful. Your cooperation and assistance are appreciated.

1. Based on the experience of National Assessment, our activities in your school will require a coordinator. This role may be filled by you or your representative. The coordinator should attend the introductory meeting with you or represent you at that meeting. The coordinator's functions are to:

   a. distribute the forms for public response (these will be brought to your school by our field personnel at the time of our initial meeting in January);

   b. prepare necessary enrollment data for eligible students (see 2. below);

   c. alert teachers and students to the arrival of the assessment staff;

   d. aid in the assessment by preparing a schedule and assuring that students are present for their assessment.

2. Enrollment data will be required for all eligible students in your school, so that each of them will have an opportunity of being in the final sample. Forms for collecting this data, and instructions for completion of the forms are attached. These forms will be picked up by our administrator during our January meeting. Students selected will not be notified until the day of their assessment.

3. A suitable space will be required for the assessment. Our administrator will discuss this need with you in January. In general, we will require a room with 15 student desks or stations, comfortably spaced, and a desk for the administrator. The room will have to have an electrical outlet to permit use of a tape player.

FIGURE 4

MAILING TO PRINCIPALS

Principals of selected schools received all the materials included in Figure 3 with the exception of the cover letter, plus the material shown on pages 38 through 40.

ISIS

INSTITUTE FOR THE STUDY OF INQUIRING SYSTEMS

3508 MARKET STREET PHILADELPHIA, PA. 19104 (215) 386-2186

We are writing to request your cooperation in a program to assess the educational programs of Connecticut Public Schools. We have been retained by the State Department of Education to conduct the first two steps in that program - an assessment of reading skills, and a determination of public judgment of the goals of Connecticut education.

The objective of the reading assessment is to compare information about the reading skills of Connecticut students to similar information garnered nationwide by the National Assessment of Educational Progress. To that end the exercises to be used in the assessment are identical with those used by National Assessment and are based upon commonly accepted educational objectives.

Your school is one of approximately 150 schools randomly selected to take part in the study. The data collected will be reported only in broad categories and will in no way identify individual students, schools, or school districts. The assessment will be conducted by our own staff; none of your personnel will be asked to administer the exercises.

In order to carry out the second part of the program, the public response to Connecticut educational goals, our administrators will supply forms to be distributed to staff and students in your school. The student forms are to be carried home, filled out by parents and returned in prepaid envelopes.

Enclosed is additional information about the program including an introductory letter from Commissioner Sanders, detailed information about National Assessment and a memo detailing our schedule, the in-school activities of our field personnel, and a description of several tasks whose completion is necessary if we are to be successful in the assessment program.

We are looking forward to your support of the program and to visiting your school.

Sincerely,

George A. Kaufmann
Project Coordinator

GAK:ldw

Enclosures

ISIS

INSTITUTE FOR THE STUDY OF INQUIRING SYSTEMS

3508 MARKET STREET PHILADELPHIA, PA. 19104 (215) 386-2186

INSTRUCTIONS FOR STUDENT LISTING FORM

1. Leave the items Q, AS, AD, S, IN for ISIS use.

2. Write in the full school name in SCHOOL. If not part of the name, include EL for Elementary, JR for Junior High, or HS for High School.

3. Write in the full name of your school district in DISTRICT. If your school is in a numbered regional district, write in the district number with "Reg. Dist." (e.g. Reg. Dist. 12).

4. There are twenty lines on each side of each page. Write in the NAME of each "eligible" student, the GRADE (in numerals), the home ROOM where the student can be found at the beginning of the school day, and the SEX. Leave IN blank.

5. The eligibles in your school are those students who meet the checked (X) line(s) below. Most schools have only one age level of eligibles. Some schools have two (9 and 13 or 13 and 17). Enter the BIRTH YEAR in the block at the top of the form. If you have two age ranges of eligibles, use separate sets of LISTING FORMS.

   To be eligible, a student must have the right birth year and be in one of the allowable grades.

   ☐ Born in 1962 - In grade 3, 4, or 5

   ☐ Born in 1958 - In grade 7, 8, or 9

   ☐ Born in 1954 - In grade 11 or 12

   If your school is ungraded, eligibility is defined by age alone. Remember, a student born January 1, 1962, although now actually past his 10th birthday, is considered a "9 year old" for this study, since his birth year is 1962.

6. Please write legibly. You will have to read the names later. Use both sides of one form before starting another one.

   This package should contain more than enough forms for your school. If our estimate was wrong, please reproduce any extra you may need, using one of our forms as the master. The spacing is required for computer utilization.

7. After you have filled out a set of LISTING FORMS (for an age level), number them (front and back) in PAGE___OF___ at the top of each page, where the second blank is the number of pages in the set. THANK YOU.

STUDENT LISTING FORM

PAGE____OF____

BIRTH YEAR	Q

SCHOOL _____

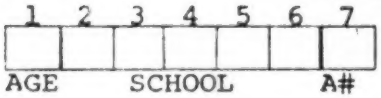
FOR OFFICE USE ONLY
AS _____

DISTRICT _____

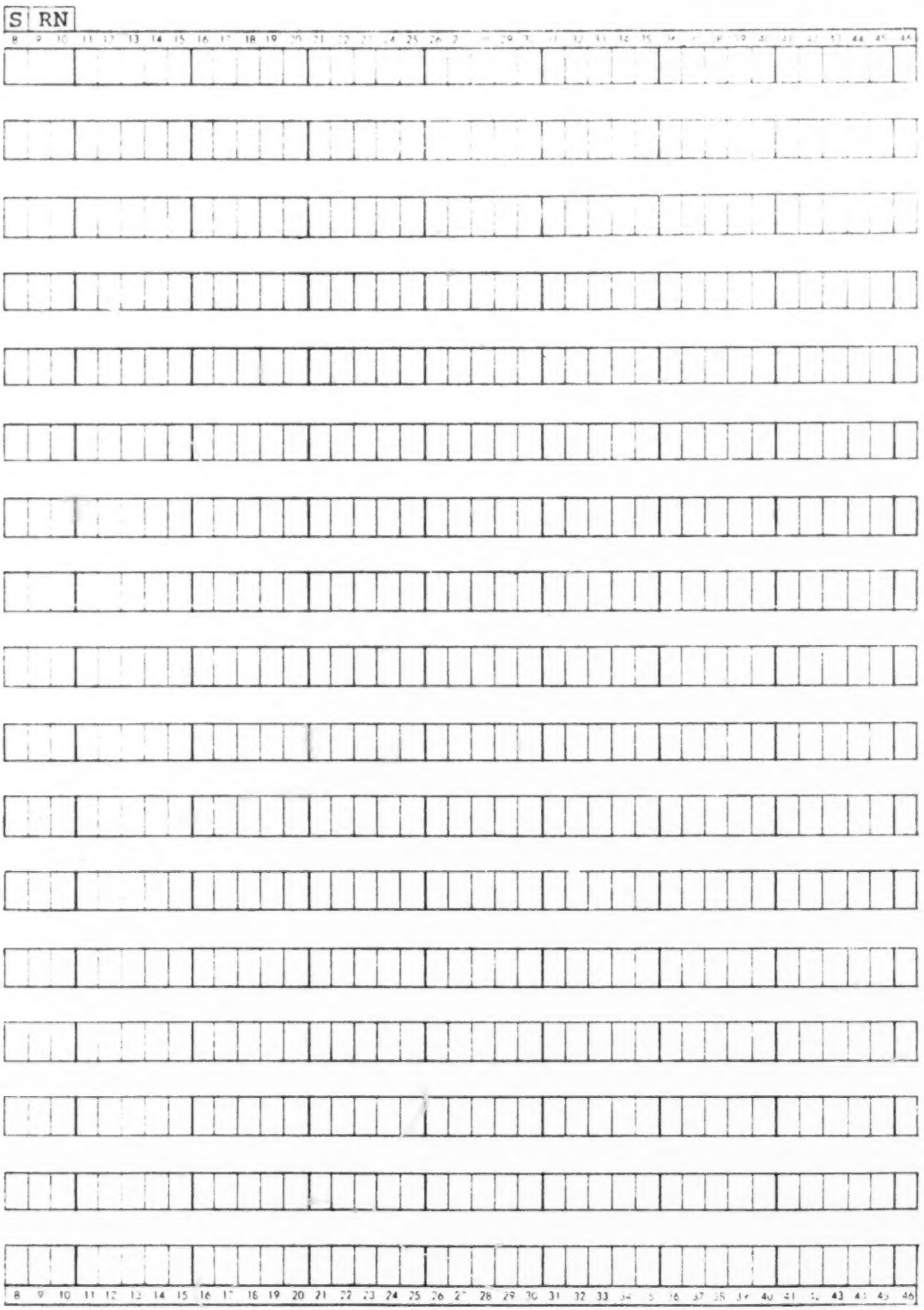
AD _____

S	NAME LAST	FIRST	M.I.	GRADE	ROOM	SEX M/F	IN

FIGURE 5. TRANSFER FORM



ISIS CONN-1



V. ANALYSIS METHODS

DATA INPUT

Once all the transfer forms had been received, they were keypunched, and the data fed into an IBM 370-165 computer. The first step in the computer analysis was a validity check of the data. Every item had a permissable range of answers depending on the number of multiple choice answers available for selection, or coded by the administrators, plus a "0" for "no answer", and a "9" for "I don't know". A table of these valid answers was input to the computer and all the assessment data checked for errors both in keypunching, and data transfer and coding by the administrators.

The errors that were detected by this "cleaning" process were checked and corrected, leaving a final combined error rate from all sources at less than half of one percent.

WEIGHTING

Weighting factors were applied to the results from each school prior to analysing them further. The factor is defined as

$$F = (E_r/E_p)\ (Q_p/Q_r)$$

E_p = predicted number of eligible students at a particular age and school

E_r = actual number of eligible students at the same age and school

Q_p = the number of students planned for assessment

Q_r = the number of completed tests submitted

The effect of the factor is two-fold. Since the probability of a particular school being sampled was proportional to Ep it is necessary to adjust the results to reflect the difference between the predicted and real numbers of eligible students. This is accomplished by that part of the factor calculated from the ratio E_r/E_p. The second part of the factor (Q_p/Q_r) adjusts the results to reflect the difference between the number of assessments required to represent the school adequately in the sample (Q_p) and the number of valid assessments actually recorded (Q_r).

To illustrate the use of the factor, consider the following hypothetical data. Let us assume a school where the nine year old population was estimated at 160, the actual number of nine year olds reported was 214, the assessment quota was 48, and 58 valid assessment booklets were submitted. The weighting factor can then be calculated as

$$F = (214/160)\ (48/58) = 1.107$$

Next this factor will be applied to equally hypothetical assessment question data from a particular school. Consider

a question with five possible answers as shown below

Answer	Responses		Adjusted Responses
1	3		3.321
2	38		42.066
3	4	x 1.107 =	4.428
4	7		7.749
5	5		5.535
No answer	1		1.107
	58		64.206

The adjusted responses calculated for each age at each school were used to calculate the percentages shown in Tables 4 through 9.

Although the weighting procedure is required for theoretical reasons, its actual impact is quite minor. The product moment correlations between the raw percentages correct and the weighted percentages correct for the 9 year olds, the 13 year olds, and the 17 year olds were 0.9995; 0.9988; and 0.9999 respectively.

STANDARD ERRORS

If the reader wishes to compare the results achieved by one student group with those of another group, it is not sufficient merely to compare the percentage correct scores for each of the two groups. Such a comparison would only yield information about the specific pupils who were sampled, rather than the total population represented by each sampled group.

In order to make valid comparisons of the percentage correct scores, it is necessary to define some terms as follow:

P_A	percentage correct scored by group A (on a particular item.)
P_B	percentage correct scored by group B
SE_A	standard error associated with P_A
SE_B	standard error associated with P_B
$SE(DIFF)=(SE_A^2+SE_B^2)^{1/2}$	standard error of the difference
$RSE=(P_A-P_B)/SE(DIFF)$	relative standard error

The value of the relative standard error of any difference is an indication of the probability of that difference being due to chance, or that the total population would differ in the same manner as the sampled population. Following is a table showing the probability value associated with various values of relative standard error.

PROBABILITY INTERPRETATION OF RELATIVE STANDARD ERRORS

RELATIVE STANDARD ERROR	PROBABILITY*
0.0	0.5000
0.4	0.6554
0.5	0.6915
0.6	0.7258
0.7	0.7580
0.8	0.7881
0.9	0.8159
1.0	0.8389
1.2	0.8849
1.4	0.9192
1.6	0.9452
1.8	0.9641
2.0	0.9772
2.5	0.9938
3.0	0.9987
3.5	0.9998
4.0	0.9999+

*This is the probability that the two population values differ in the same direction (though not necessarily by the same amount) as the two sample values being compared.

Data from Tables 4 and 10 in Section VI. will be used to illustrate the use of the table. Item 1 in Table 4 shows a p-value of 27.5 for nine-year old girls (P_A) and a p-value of 26.5 for boys (P_B). Item 1 in Table 10 shows a standard error of 1.8 for both girls (SE_A) and boys (SE_B). Calculating SE(DIFF) yields $[(1.8)^2+(1.8)^2]1/2=2.5$; calculating RSE as (27.5-26.5)/2.5 yields a relative standard error of 0.4. The table indicates a probability value of 0.6554. The results can therefore be interpreted as follows. Although it is certainly true that in

the sample of pupils actually tested, the girls did do better than the boys, the probability value of the relative standard error as calculated indicates a probability of only 65.5% that all Connecticut girls would score higher on item no. 1 than all Connecticut boys.

In general, the difference between scores is insignificant (i.e., it could have arisen from the happenstance of sampling) unless the difference between scores is large with respect to the standard error of that difference (large relative standard error). In the example cited, the relative standard error is quite small (0.4), so the data lend virtually no support to the conclusion that Connecticut's 9 year old girls really are better than 9 year old boys at answering item no. 1 correctly.

Any two populations may be compared in this manner. Comparisons may be made between pairs within NAEP, within Connecticut, or between NAEP and Connecticut. Two cautions must be observed, however, The first arises out of a mechanical consideration. For the approach to be used with strict accuracy, the two groups being compared must be independent of each other, as are all pairs with one group from NAEP results and the other from Connecticut results. But the Connecticut "Male" results should not be compared with "Total Conn." because approximately half of "Total Conn." is "Male." The "Male" results should be compared only with the "Fem." results. SOC 1, 2, 3, or 4 can be compared directly with Conn. total, since even though they are a part of the total, they are a relatively small part. However, SOC 3* is over 80% of the total and should only be compared with SOC 4* not with any other SOC or with Connecticut total.

The second caution arises from a more theoretical basis. The example shown above of the use of the standard errors (item 1, 9 year olds, sex) was picked merely because it was the first item in the results tables (Table 4). If, however, we looked at all the boy/girl comparisons for Connecticut results in that table and picked an item to test, because it was largest, we could not use the approach described here. The largest difference

between 9 year old Connecticut boys and girls occurs in item 18A, where the girls' score is 38.6% correct and the boys' score is 30.1%, giving a difference of 8.5 percentage points. The standard errors for those two scores (from Table 10) are 2.2 for boys and 2.6 for girls. If we calculate the relative standard error it comes to 3.4, which gives a probability of 0.9938 that Connecticut 9 year old girls <u>really</u> are better on item 18A than are Connecticut boys.

But we cannot make this interpretation! Remember, we looked for the largest difference we could find, and <u>then</u> tested it. The test can only be used properly when the item to be examined is picked before the results are looked at. We picked the largest difference out of 22 to test. It's as though we asked each of 22 boys and 22 girls to flip a coin 10 times. We might well find that the girl who flipped the most heads had 8 of them, and the boy who flipped the least heads had only 2. To judge from this that girls are better than boys at flipping heads is not valid. There are special statistical procedures that can be used, but they are too complex to be given here.

Table 13 (Section VI.) shows the comparisons of Connecticut with National Assessment data and indicate by + and - signs those differences that have statistical significance. One, two, or three symbols in the table refer to one, two, and three relative standard errors, respectively. Thus, item 8 for 9 year olds (+++) shows the Connecticut percent correct was three or more standard errors above the National percent correct, while on item 10 the Connecticut score was between two and three (--) standard errors below National.

A glance at this table clearly shows that,on the whole, Connecticut did better than the national averages. If the number of double and triple plusses are counted and compared to the double or triple minuses, we find for nine year olds 10 to 1; for thirteen year olds 11 to 1; and for seventeen year olds the ratio is 20 to 2.

The sample score P and its SE also permit the estimation of the liklihood that the true population score (P*) is contained in any specified range. The probability is 0.678 that the population score is within the range P$\pm$ 1 SE. Thus, for a P of 26.5 and an SE of 1.8, the chances are about 2 to 1 (0.678) that P* is between 24.7 and 27.3 (26.5 $\pm$ 1.8). For P $\pm$ 2SE the probability is 0.954 and for P $\pm$ 3SE it rises to 0.997. Thus, for any P value in the Results section, a range can be estimated which will include the true overall population score at any desired level of probability.

VI. RESULTS

This section of the report contains all of the results developed from the Connecticut Reading Assessment. The primary mode of all data reporting herein is by indicating the adjusted (See Section V.) percentage of students having selected a particular response to each item. Where these percentages indicate the correct answer they are referred to as "P-values." Explanation of the content of all data tables and comments thereon follow.

- Figures 6 through 8. These figures contain the exercises used in the Reading Assessment for ages 9, 13, and 17 respectively. The correct answer to each exercise is indicated by a darkened oval. The adjusted percentage of children throughout the state selecting any particular answer is shown next to the appropriate oval. The individual exercises as shown are reduced size copies exactly as they were used by both National Assessment and ISIS. Some of these exercises make use of copyrighted materials. Both National Assessment and ISIS have obtained permission to use such copyrighted material where required. Any other users of this material are responsible for obtaining additional necessary permissions to use the copyrighted materials. The assessment booklets used in Connecticut listed the copyright holders and their addresses.

- Figure 9. This figure gives the definition of SOC as used in Connecticut (repeated here for convenience from Section III.) and as used nationally by National Assessment. The particular geo-political definition of Connecticut towns, the absense of counties, and the obvious fact that Connecticut has no cities with population greater than 200,000 precluded the use of National Assessment definitions directly. Had National Assessment's SOC definitions been applied to Connecticut, 87% of the state would have been classified as "Medium-sized Cities" and the remainder as "Smaller Places." (The use of these definitions is reported in Tables 7 - 9.) The definitions selected for use were intended to permit meaningful comparisons with national data despite the differences in

definition. In using the data to make these comparisons, these differences must be kept in mind. It should also be kept in mind that even where these definitions largely coincide, as they do, for example, in Smaller Places, it is likely that the towns that qualify as Smaller Places in Connecticut do not have the same educational "flavor" as do the Smaller Places throughout rural America.

- Tables 4 through 6. These tables show the weighted percentages of Connecticut children who selected the correct answer, as briefly described on the tables, to the indicated item. Data is presented for the total State, by sex, and by SOC. Readers who wish to use the data for making comparisons between any such groups are cautioned to read Section V. Following the presentation of data for multi-part items, data is shown which indicate the percentages of students answering none of the parts correctly (zero correct), one of the parts correctly (one correct), etc. (For example see Item No. 18, Table 4.)

- Tables 7 through 9. These tables repeat the data shown in tables 4 through 6 and include the corresponding data for each item as reported by National Assessment. The first three columns in order show the Connecticut results (CONN), national results as reported by NA (NATL), and results for the northeast quadrant of the country, also as reported by NA (NE). The northeast consists of the following states: Connecticut, Delaware, the District of Columbia, Maine, Maryland, Massachusetts, New Hampshire, New Jersey, New York, Pennsylvania, Rhode Island, and Vermont. In the rest of the table (C) indicates Connecticut results, and (N) indicates National results. The columns 3* and 4* report Connecticut data classified by NA definitions of SOC. Multi-part items are again followed by data indicating the percentages in each group who got zero correct (0), one correct (1), etc. The use of "n.a." anywhere in the tables

indicates data that was not available from National Assessment. Readers are again cautioned to read Section V. before attempting to use the data of these tables to compare groups.

- Tables 10 through 12. These tables list the standard errors (SE) associated with each P-value reported by both National Assessment and ISIS. The NA standard errors were not reported by NA in the preliminary copy of their report made available to ISIS, but were secured by private communication with NA. It is not known whether they will be reported in the final issue of their report. The calculation of standard errors included the effects of both anticipated and empirically determined variations in the values of most of the parameters involved in the sampling and testing process. The standard errors are of use if one wishes to draw statistically valid conclusions about the expected performance of the total populations based on comparisons of the performances of the sampled populations. The use of the standard errors to make such comparisons is detailed in Section V.

  An additional interpretation of the standard errors can be made as follows. Given a p-value and its standard error it can be said that there is a 67.8% probability that the total population score on this item is between the p-value plus or minus one standard error; there is a 95.4% probability of the total population scoring between the p-value plus or minus two standard errors; and there is a 99.7% probability of the total population scoring between the p-value plus or minus three standard errors.

- Table 13. The derivation and use of this table is fully described in Section V. Briefly the significance of the difference between Connecticut and national p-values is indicated by a number of + or - signs; + indicating that Connecticut children scored higher than national, and minus indicating that Connecticut scored lower. The number of signs shown indicates the magnitude of the relative standard error for the item.

- Table 14. The remainder of the report examines the median performances of all the student groups at each age on the exercises within each reading objective. This table shows the Connecticut reading objective(s) tested by each item at all three age levels.

- Tables 15 through 17. These tables show the median scores of all the student groups at each age for the exercises within each reading objective as shown on Table 14. The numbers shown in the tables are midpoints of ranges of exercise percentages of success for groups. A median percentage of success represents a central tendency for a group on a given reading objective. These median scores are to be used only to observe the trends in reading abilities of the various groups within the three age groups. Because of the differences in difficulty among the various exercises used to test each objective it is not valid to compare the median scores between different age groups.

- Figures 10 through 21. These figures depict graphically much of the data of Tables 15 through 17. There are a set of figures for each reading objective. On each figure there are five bargraphs illustrating the comparative median scores of Connecticut vs. national student groups, one for the total sample, and one each for each of four SOC groups.

FIGURE 6

ASSESSMENT EXERCISES
AND RESPONSES

AGE 9

1. Read the story on the opposite page so that you can complete the sentence on this page.

The title which tells the MOST about this story is

16.2% ○ "Painted Easter Eggs."
27.0 ● "Easter Eggs in the Past."
8.5 ○ "Easter Eggs in Scotland."
41.0 ○ "Easter Eggs in King Edward's Day."

3.7 ○ I don't know.
3.7 No answer.

1. (Continued)

Almost seven hundred years ago, King Edward of England bought 450 Easter eggs painted gold and other bright colors. He paid about 18 cents for all of them. Prices have gone way up since then. Easter eggs have been made not only from real eggs. Some of the most beautiful were fancy oval-shaped objects of silver and enamel, colorful stones or glass. Many had ribbons, beads, or feathers on them. Some of the tastiest looking eggs could not be fried or boiled. They were made of chocolate or of sugar-filled candy. During the 19th century, candy eggs with a window at one end and tiny scenes inside were given as gifts. In England messages and dates were written on the eggs, and in Scotland children were given hard-boiled eggs as toys on Easter Sunday.

2. Read the story and complete the sentence which follows it.

The wind whistled woefully as it wound its way through the nearly leafless trees. The pale yellow moon cast eerie shadows as it slipped in and out from behind the clouds like a blinking flashlight. Strange figures could be seen dashing and darting through the streets. Ghosts, goblins -- what could they be? What do they want? Whom have they come to haunt? Beware . . .

The mood or feeling of this story is

5.4% ○ amusing.
78.4 ● frightening.
2.6 ○ gay.
6.1 ○ ridiculous.
1.9 ○ sad.

4.5 ○ I don't know.
1.1 No Answer.

3. Read the question and fill in the oval beside the correct answer.

If you like books which are NOT about people, which one of the following would you read?

7.8% ○ The Jazz Man
4.0 ○ Johnny Tremaine
72.6 ● All about Elephants
11.0 ○ Who's in Charge of Lincoln?

3.3 ○ I don't know.
1.2 No Answer.

4. This is like a game to see if you can tell what the nonsense word in the paragraph stands for. The nonsense word is just a silly word for something that you know very well. Read the paragraph and see if you can tell what the underlined nonsense word stands for.

You can wash your face and hands in zup. You can even take a bath in it. When people swim, they are in the zup. Everyone drinks zup.

Zup is probably

2.9% ○ milk.
2.4 ○ pop.
6.6 ○ soap.
85.0 ● water.

2.1 ○ I don't know.
1.0 No Answer.

5. Read the story and answer the question which follows it.

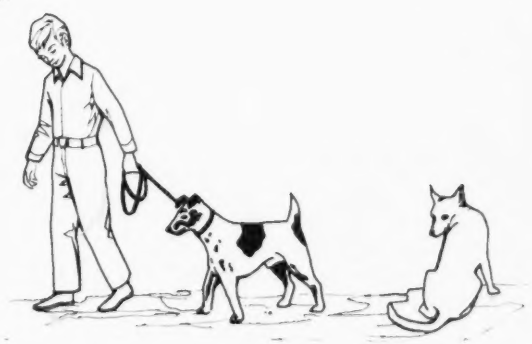
I would rather have a dog than a cat for a pet. These are my reasons. First, a dog is friendlier than a cat. Second, a dog can go anywhere with you. Third, a dog is easier to take care of than a cat.

How many reasons does this person give for wanting a dog instead of a cat for a pet?

4.2% ○ One
5.7 ○ Two
84.2 ● Three
3.9 ○ Four

1.5 ○ I don't know.
0.6 No Answer.

6.



Look at the picture and fill in the oval beside the sentence which tells BEST what the drawing shows.

1.9% ○ The boy has two dogs on a leash.
5.8 ○ The boy is walking behind his dog.
88.5 ● The dog on the leash has spots on it.
1.7 ○ The dog sitting down has spots on it.

1.6 ○ I don't know.
0.5 No Answer.

7. Complete the sentence with the words that make the MOST sense.

The boy wanted

91.2% ● a new ball.
0.6 ○ under dinner.
1.9 ○ rode his bike.
2.3 ○ to the circus.
1.7 ○ stopped raining.

1.4 ○ I don't know.
0.8 No Answer.

8. Read the two stories and answer the question which follows them.

Story 1

A handsome prince was riding his horse in the woods. He saw a dragon chasing a beautiful princess. The prince killed the dragon. The prince and the princess were then married.

Story 2

Mary was taking a boat ride on a lake. The boat tipped over. Mary was about to drown when a young man jumped in the lake and saved her.

If Story 2 ends like Story 1, what would happen next in Story 2?

6.7% ○ A prince would kill a dragon.
5.2 ○ The young man would become a prince.
74.5 ● Mary and the young man would get married.
5.3 ○ The king would give the young man some money.

5.8 ○ I don't know.
2.5 No Answer

9. If you listen carefully to what a person says, you can usually tell a lot about him. Sometimes you can tell how he feels.

Read the passage and complete the sentence which follows it.

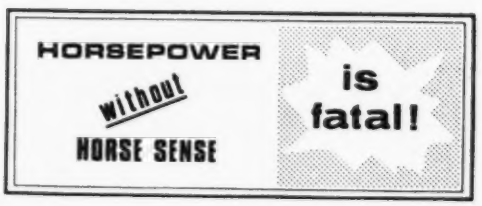
"I'll be glad when this TV show is over. I like stories about spies, not this one about cowboys and Indians. I get to pick the next show."

The person who said this

79.2% ● likes spy stories.
2.5 ○ doesn't like TV at all.
5.8 ○ doesn't care what TV show is on.
10.1 ○ likes stories about cowboys and Indians.

1.4 ○ I don't know.
0.9 No Answer.

10.



Where would you probably see this sign?

19.6% ● On a highway
2.0 ○ On a gymnasium floor
71.1 ○ At a racetrack for horses
3.7 ○ In a grocery store

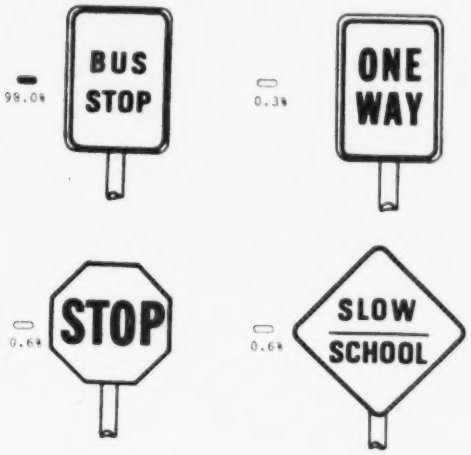
3.2 ○ I don't know.
0.4 No Answer

11. You want to call Mr. Jones on the telephone. You look in the telephone book for his number. You would find it between which names?

1.5% ○ Jackson and Jacobs
2.2 ○ Jacobs and James
17.8 ○ James and Johnson
70.0 ● Johnson and Judson
2.9 ○ Judson and Justus

4.6 ○ I don't know.
0.9 No Answer.

12. Fill in the oval beside the sign that a boy might look for if he needed to take a bus home.



99.0% BUS STOP
0.3% ONE WAY
0.6% STOP
0.6% SLOW / SCHOOL

0.2% I don't know
0.2 No Answer

13. Read the question and fill in the oval beside the correct answer.

If you had to tell your class about windmills, which of these would be the BEST book to use?

5.9% An atlas
20.1 A dictionary
65.1 An encyclopedia
4.2 The Yellow Pages in the telephone book

4.3 I don't know.
0.4 No Answer.

14. Here are some figures with an oval below each figure. Fill in the oval below the figure that can be made with just three lines that cross each other.

2.5% 2.1% 93.3% 0.8% 1.1%

0.1 I don't know
0.1 No Answer

15. What is the BEST way to find out if there is something about Eskimos in a book?

56.1% Look in the index
11.1 Look in the glossary
16.5 Look at the title page
6.4 Look through all the pages
6.8 Skim through the introduction

2.6 I don't know
0.5 No Answer.

16. **A compound word is a word which is made by joining two words together. Fill in the oval beside the compound word.**

1.9 ⬭ ACROBAT

94.6 ⬬ CLASSROOM

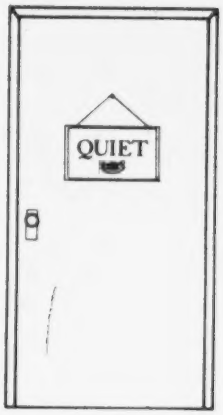
1.1 ⬭ SEPARATE

1.2 ⬭ SUMMER

1.1 ⬭ I don't know.

0.4 No Answer.

17.



Look at the picture and fill in the oval beside the sentence which tells BEST what the drawing shows.

2.6% ⬭ A sign is hanging by the door.

93.0 ⬬ A sign is hanging on the door.

1.8 ⬭ A sign is hanging over the door.

1.1 ⬭ A sign is hanging near the door.

1.0 ⬭ I don't know.

0.4 No Answer.

18. Read the passage and answer the questions on the next page.

One spring Farmer Brown had an unusually good field of wheat. Whenever he saw any birds in this field, he got his gun and shot as many of them as he could. In the middle of the summer he found that his wheat was being ruined by insects. With no birds to feed on them, the insects had multiplied very fast. What Farmer Brown did not understand was this: A bird is not simply an animal that eats food the farmer may want for himself. Instead, it is one of many links in the complex surroundings, or environment, in which we live.

How much grain a farmer can raise on an acre of ground depends on many factors. All of these factors can be divided into two big groups. Such things as the richness of the soil, the amount of rainfall, the amount of sunlight, and the temperature belong together in one of these groups. This group may be called non-living factors. The second group may be called living factors. The living factors in any plant's environment are animals and other plants. Wheat, for example, may be damaged by wheat rust, a tiny plant that feeds on wheat; or it may be eaten by plant-eating animals such as birds or grasshoppers. . . .

It is easy to see that the relations of plants and animals to their environment are very complex, and that any change in the environment is likely to bring about a whole series of changes.

18. (Continued)

A. What is the MAIN idea of this passage?

30.8% ⬭ Farmers should not shoot any birds.

12.4 ⬭ Insects eat up all the farmer's crops.

4.5 ⬭ No crops can be grown without sunlight.

7.0 ⬭ Birds eat up most of the farmer's grain.

34.4 ⬬ All living things are affected by living things.

7.6 ⬭ I don't know.

3.3 No Answer.

B. The passage also points out the importance of which fact?

13.9% ⬭ A bird is simply an animal that eats up grain.

4.0 ⬭ Wheat rust is similar to the rust on your own bicycle.

14.2 ⬭ Only living factors determine how much corn can be raised.

9.6 ⬭ How much wheat is grown depends only on how much is planted.

31.5 ⬬ Any change in the environment is likely to cause other changes.

15.5 ⬭ I don't know.

11.3 No Answer.

19. Read the story and answer the question which follows it.

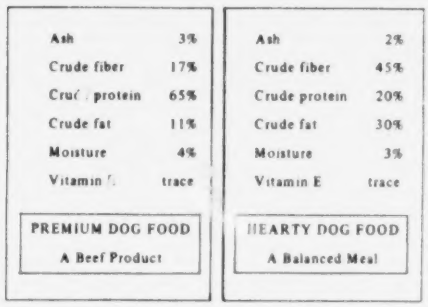
One day Amos the Ant took his lunch to the park. He sat down under a tree and started to eat. Then some children came over. Amos gave them each a sandwich. It was a fine day for a picnic.

How do you know this story is make-believe?

3.0% ○ Ants don't eat.
3.8 ○ Ants aren't in parks.
4.9 ○ Ants eat lunch at home.
80.0 ● Ants don't give people food.
4.4 ○ Children are afraid of ants.

3.3 ○ I don't know.
0.6 No Answer.

20. Look at the labels from two cans of dog food. One can has more protein in it than the other. Fill in the oval below the dog food that contains more protein.



● 64.8% ○ 31.6%

2.6% ○ I don't know.
1.0 No Answer

21. Read the story and complete the sentence on the next page.

After two weeks of unusually high-speed travel we reached Xeno, a small planet whose population, though never before visited by Earthmen, was listed as "friendly" in the Interstellar Gazetteer.

On stepping lightly (after all, the gravity of Xeno is scarcely more than twice that of our own moon) from our spacecraft we saw that "friendly" was an understatement. We were immediately surrounded by Frangibles of various colors, mostly pinkish or orange, who held out their "hands" to us. Imagine our surprise when their "hands" actually merged with ours as we tried to shake them!

Then, before we could stop them (how could we have stopped them?), two particulary pink Frangibles simply stepped right into two eminent scientists among our party, who immediately lit up with the same pink glow. While occupied in this way, the scientists reported afterwards, they suddenly discovered they "knew" a great deal about Frangibles and life on Xeno.

Apparently Frangibles could take themselves apart atomically and enter right into any other substance. They communicated by thought waves, occasionally merging "heads" for greater clarity. Two Frangibles who were in love with each other would spend most of their time merged into one; they were a bluish-green color unless they were having a lover's quarrel, when they turned gray.

21. (Continued)

The author's MAIN purpose in this story is to

10.0% ○ create suspense and mystery.
7.3 ○ sell people on space travel.
18.4 ○ arouse concern for Frangibles.
40.4 ● create an imaginary space story.
10.1 ○ tell his personal feelings about events.

12.2 ○ I don't know.
1.7 No Answer

FIGURE 7

ASSESSMENT EXERCISES
AND RESPONSES

AGE 13

1. Read the sentence and fill in the oval beside the group of words which tells what the sentence means.

"I certainly won't miss that movie."

7.7% ○ I like that movie.
73.7% ● I'm going to that movie.
7.3% ○ I'm not going to that movie.
8.3% ○ I hope I'll see that movie, but I don't know if I can.
1.7% ○ I didn't see that movie, although it was here all fall.

0.9% ○ I don't know.
0.4% No Answer.

2. People who run zoos sometimes put signs on animal cages to tell what the animals are like or where they come from. If you went to a zoo and saw these four signs on different cages, which one would tell you that there is a dangerous animal inside the cage? Fill in the oval beside the correct sign.

0.9% ○ Inside this cage is one of the smallest animals found in America.

97.2% ● Inside this cage is an extremely ferocious animal.

0.4% ○ Inside this cage is an animal that sleeps all the time.

1.2% ○ Inside this cage is a rare type of eagle-- one of the few left in the world.

0.2% ○ I don't know.
0.1% No Answer.

3. Read the story and answer the question which follows it.

After two weeks of unusually high-speed travel we reached Xeno, a small planet whose population, though never before visited by Earthmen, was listed as "friendly" in the Interstellar Gazetteer.

On stepping lightly (at 1/3 the gravity of Xeno is scarcely more than twice that of our own planet) from our spacecraft we saw that "friendly" was an understatement. We were immediately surrounded by Erangibles of various colors, mostly pinkish or orange, who held out their "hands" to us. Imagine our surprise when their "hands" actually merged with ours as we tried to shake them!

Then, before we could stop them (how could we have stopped them?), two particularly pink Erangibles simply stepped right into two eminent scientists among our party, who immediately lit up with the same pink glow. While occupied in this way, the scientists reported afterwards, they suddenly discovered they "knew" a great deal about Erangibles and life on Xeno.

Apparently Erangibles could take themselves apart atomically and enter right into any other substance. They communicated by thought waves, occasionally merging "heads" for greater clarity. Two Erangibles who were in love with each other would spend most of their time merged into one; they were a bluish green color unless they were having a lover's quarrel, when they turned gray.

Which one of the following seems to be FALSE?

46.0% ○ The Erangibles had been visited before.
4.7% ○ Space travel had progressed a great deal.
5.8% ○ Xeno was a considerable distance from Earth.
24.4% ● Earthmen were the only creatures to have traveled in space.
10.4% ○ There was cooperation between inhabitants of various planets.

7.4% ○ I don't know.
1.4% No Answer.

4. Read the question and fill in the oval beside the correct answer.

If you had to tell your class about windmills, which of these would be the BEST book for you to use?

3.0% ○ An atlas
6.6% ○ A dictionary
88.9% ● An encyclopedia
0.9% ○ The Yellow Pages in the telephone book

0.3% ○ I don't know.
0.1% No Answer.

72

5. Read the passage and answer the question which follows it.

I Skiing has recently become one of the more popular sports in the United States. Because of its popularity, thousands of winter vacationers are flying north rather than south. In many areas, reservations are required months ahead of time.

II I discovered the accommodation shortage through an unfortunate experience. On a sunny Saturday morning I set out from Denver for the beckoning slopes of Aspen, Colorado. After passing signs for other ski areas, I finally reached my destination. Naturally I lost no time in heading for the nearest tow. After a stimulating afternoon of miscalculated stem turns I was famished. Well, one thing led to another and it must have been eight o'clock before I concerned myself with a bed for my bruised and aching bones.

III It took precisely one phone call to ascertain the lack of lodgings in the Aspen area. I had but one recourse. My auto and I started the treacherous jaunt over the pass and back towards Denver. Along the way, I went begging for a bed. Finally, a jolly tavernkeeper took pity and for only thirty dollars a night allowed me the privilege of staying in a musty, dirty, bathless room above his tavern.

The author's love for skiing is suggested in which paragraph(s)?

20.9% ○ I
37.5 ● II
4.4 ○ III
10.1 ○ I and II
22.0 ○ None of the paragraphs

3.6 ○ I don't know
1.5 No Answer.

6. Look at the labels from two cans of dog food. One can has more protein in it than the other. Fill in the oval below the dog food that contains more protein.

Ash	3%
Crude fiber	17%
Crude protein	65%
Crude fat	11%
Moisture	4%
Vitamin E	trace

PREMIUM DOG FOOD
A Beef Product

Ash	2%
Crude fiber	45%
Crude protein	20%
Crude fat	30%
Moisture	3%
Vitamin E	trace

HEARTY DOG FOOD
A Balanced Meal

83.2% ● 14.8% ○

1.5% ○ I don't know
0.5% No Answer

7. Look at the following report card. What period of time do these grades cover?

JONES, RICHARD — STUDENT NAME
100902423 — STUDENT NUMBER
10 — GRADE
0015 — HOME ROOM

REPORT CARD

WILLARD HIGH — SCHOOL NAME
PERIOD ENDING 11/15/69

TEACHER	1ST PERIOD MARK	1ST PERIOD CITIZENSHIP COMMENTS	1ST PERIOD DAYS ABSENT	2ND PERIOD MARK	2ND PERIOD CITIZENSHIP COMMENTS	2ND PERIOD DAYS ABSENT	SEMESTER MARK	SEMESTER DAYS ABSENT	COURSE NUMBER	TEACHER
SPAN SB/6B	A								G1560	ZUCKER
LIFE SCI	B	2							B1490	MARCOTT
INT ENG 3 4	B-								E0150	B. SMITH
BOYS PE 10	C								P7030	CAGY
SEASON EVENTS	C								S1150	RABINOVITZ
ALG 1B 2B	C	5							M1250	ROHRS

TO INTERPRET MARKS SEE BELOW

JONES, RICHARD — STUDENT NAME
100902423 — STUDENT NUMBER
GPA THIS PERIOD 2.80
GPA THIS SEMESTER

TO THE PARENTS OF
JONES, RICHARD
722 HENLEY ST
SANTA ROSA CA 95404

LEGEND

SCHOLASTIC MARKS

A OUTSTANDING
B GOOD
C SATISFACTORY
D MINIMUM ACHIEVEMENT
F FAILING
I INCOMPLETE
NM NO MARK
CR CREDIT
WP WITHDRAW PASSING
WF WITHDRAW FAILING
P PASSING

CITIZENSHIP COMMENTS CODE

0 STUDENT DOING EXCELLENT WORK
1 STUDENT IS PROGRESSING SATISFACTORILY
2 STUDENT IS IMPROVING IN THIS COURSE
3 STUDENT ACHIEVING BELOW APPARENT ABILITY
4 BOOKS OR MATERIALS NOT BROUGHT TO CLASS
5 ASSIGNMENTS ARE NOT COMPLETED REGULARLY
6 POOR ATTENDANCE IS AFFECTING SCHOOL WORK
7 STUDY HABITS NEED IMPROVING
8 BEHAVIOR NEEDS IMPROVING
9 PLEASE CONTACT TEACHER THROUGH COUNSELOR

(Continued)

88.7% ● The first reporting period
2.9 ○ The second reporting period
3.7 ○ The entire semester
1.8 ○ The entire year

2.6 ○ I don't know
0.4 No Answer

5. Read the passage and answer the questions on the next page.

POISON IVY

The interval for burning, itching, and finally water filled blisters to appear varies a great deal. This, again, may depend on some differences in human skin, and the symptoms of dermatitis can develop within a few hours or even days later. The most important factor in using any remedy or treatment is TIME. Unless you can wash the poisonous sap away within 5 to 10 minutes after exposure, you are likely to be in trouble. Wash the entire body at once with any bland soap and then change clothing which must be laundered before being worn again. It is, of course, very obvious that washing is not always possible immediately after known contact with such irritating plants, and a tub or shower after outdoor activity is generally too late to avoid dermatitis if you have been exposed to or in contact with poison ivy. The blister fluid associated with ivy poisoning does not spread the irritation, but it is the oily, poisonous resin which is transferred to other skin areas by rubbing or scratching.

There are some simple preparations for treatment of ivy poisoning. An easily prepared "remedy" can be made by using equal parts of baking soda and cornstarch with enough water to form a paste or a lotion. Wet packs of boric acid are helpful in case of severely poisoned eyelids and swollen eyes. Calamine lotion can be used to sooth the discomfort of itching, burning skin. Preparations containing iron salts are likely to cause permanent tattoo effects, especially if skin in the area of application is broken.

5. (Continued)

A. Which of the following is essential to avoid ivy dermatitis once a person is exposed to poison ivy?

2.7% ○ Cut down the ivy plant.
12.7 ○ Do not scratch the affected areas.
3.3 ○ Put calamine lotion on the affected areas.
1.5 ○ Put iron salt solution on the exposed areas.
69.3 ● Wash all exposed areas within about five minutes of exposure.
6.7 ○ I don't know.
1.8 No Answer

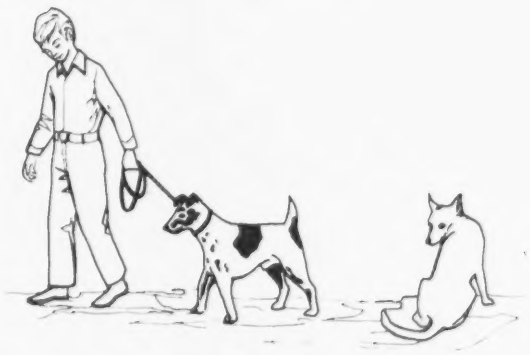
B. Which of the following will soothe the itching from ivy poisoning?

1.9% ○ Cut down the ivy plant.
5.9 ○ Do not scratch the affected areas.
80.4 ● Put calamine lotion on the affected areas.
3.2 ○ Put iron salt solution on the exposed areas.
3.9 ○ Wash all exposed areas within about five minutes of exposure.
2.0 ○ I don't know.
2.6 No Answer

5. (Continued)

C. What should you do if the ivy poisoning affects your eyelids?

3.7% ○ Apply calamine lotion.
3.5 ○ Apply iron salt solution.
5.0 ○ Apply mild soap solution.
65.2 ● Apply wet packs of boric acid solution.
13.1 ○ Apply a paste of baking soda and cornstarch.
5.6 ○ I don't know.
3.8 No Answer.



Look at the picture and fill in the oval beside the sentence which tells BEST what the drawing shows.

1.0% ○ The boy has two dogs on a leash.
2.8 ○ The boy is walking behind his dog.
94.5 ● The dog on the leash has spots on it.
0.9 ○ The dog sitting down has spots on it.
0.6 ○ I don't know.
0.2 No Answer.

10. Read the poem and answer the questions which follow it.

Fortune and Men's Eyes

Shakespeare

1 When, in disgrace with fortune and men's eyes,
2 I all alone beweep my outcast state,
3 And trouble deaf heaven with my bootless cries,
4 And look upon myself and curse my fate,
5 Wishing me like to one more rich in hope,
6 Featured like him, like him with friends possessed
7 Desiring this man's art, and that man's scope,
8 With what I most enjoy contented least;
9 Yet in these thoughts myself almost despising,
10 Haply I think on thee, and then my state,
11 Like to the lark at break of day arising
12 From sullen earth, sings hymns at heaven's gate;
13 For thy sweet love remembered, such wealth brings
14 That then I scorn to change my state with kings.

A In Line 3, "deaf heaven" refers to a

28.4% ○ quiet place.
24.9 ○ troubled place.
28.4 ● God who does not hear.
12.6 ○ Heaven for deaf people.

5.6 ○ I don't know.
0.2 No Answer

10. (Continued)

B What seems to cause him to wish to be different than he is?

10.1% ○ "Such wealth brings"
12.2 ○ "Hymns at heaven's gate"
12.2 ○ "The lark at break of day"
34.4 ● "Thy sweet love remembered"
17.0 ○ "Change my state with kings"

12.7 ○ I don't know.
1.4 No Answer.

11.

Look at the picture and fill in the oval beside the sentence which tells BEST what the drawing shows.

0.5% ○ A sign is hanging by the door.
98.5 ● A sign is hanging on the door.
0.4 ○ A sign is hanging over the door.
0.2 ○ A sign is hanging near the door.

0.2 ○ I don't know.
0.2 No Answer

12. Read the passage and complete the sentence which follows it.

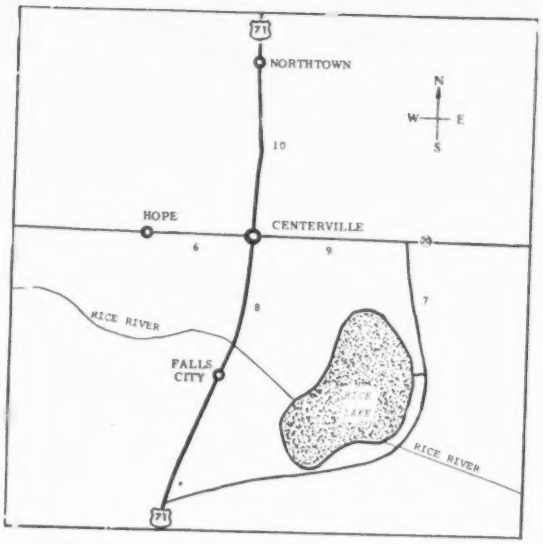
Between April and October the Persian Gulf is dotted with the small boats of pearl divers. Some seventy-five thousand of them are busy diving down and bringing up pearl-bearing oysters. These oysters are not the kind we eat. The edible oyster produces pearls of little or no value. You may have heard tales of divers who discovered pearls and sold them for great sums of money. These stories are entertaining but not accurate.

The Persian Gulf has many

8.5% ○ large boats of pearl divers.
2.1 ○ pearl divers who eat oysters.
20.2 ○ edible oysters that produce pearls.
64.6 ● non-edible oysters that produce pearls.
2.1 ○ edible oysters that do not produce pearls.

2.2 ○ I don't know.
0.3 No Answer.

13. Look at the road map and read each sentence carefully. If what the sentence says is true, fill in the oval beside "True." If what the sentence says is not true, fill in the oval beside "False." If you can't decide if the sentence is true or false, fill in the oval beside "I don't know."



A. By car Northtown is closer to Rice Lake than to Hope.

5.5% ○ True
93.2 ● False

0.8 ○ I don't know.
0.5 No Answer

(Continued)

B. You can drive all the way from Northtown to Falls City on Highway 71.

96.3% ● True
3.2 ○ False

0.4 ○ I don't know.
0.2 No Answer.

C. Hope is the town closest to Centerville.

96.9% ● True
2.6 ○ False

0.4 ○ I don't know.
0.2 No Answer.

D. Centerville is farther west than Hope.

7.4% ○ True
91.7 ● False

0.6 ○ I don't know.
0.2 No Answer.

E. Highway 39 runs on the south side of Rice River.

19.5% ○ True
77.6 ● False

2.5 ○ I don't know.
0.4 No Answer.

14. Read the question and fill in the oval beside the correct answer.

If you like books which are NOT about people, which one of the following would you read?

2.5% ○ The Jazz Man
1.1 ○ Johnny Tremaine
85.0 ● All about Elephants
1.7 ○ Who's in Charge of Lincoln?

9.2 ○ I don't know.
0.4 No Answer

15. Look at the chart and answer the question which follows it.

You have planned to do the following things this week:

Monday	9:00 a.m.	-	4:30 p.m.	School
Monday	5:00 p.m.	-	6:15 p.m.	Cheerleader practice
Tuesday				Vacation from school
Wednesday	9:00 a.m.	-	4:30 p.m.	School
Wednesday	7:00 p.m.			Bowling
Thursday	9:00 a.m.	-	4:30 p.m.	School
Thursday	10:00 p.m.			Slumber party
Friday	9:00 a.m.	-	11:30 a.m.	School, 1/2 day
Saturday	4:30 p.m.	-	7:00 p.m.	Birthday party

Which one of the following additional things could you go to on time if you wanted to?

15.9%	○ Monday	6:00 p.m.	-	8:00 p.m.	Concert at the Adam's Theater
7.7	○ Wednesday	1:30 p.m.	-	3:00 p.m.	Little Theater Meeting
8.7	○ Thursday	10:00 a.m.	-	11:00 a.m.	Free popcorn at Hanson's store
35.7	● Friday	7:30 p.m.	-	11:00 p.m.	Spring Formal
7.8	○ Saturday	5:00 p.m.	-	7:30 p.m.	Movie, Tarzan

14.6 ○ I don't know.
9.6 No Answer

16. Read the passage and answer the question which follows it.

A sports car differs from an ordinary passenger car in that its size and number of accessories are limited. The sports car also differs from the ordinary passenger car in performance. It can attain higher speeds because it is built smaller and lower. For these reasons it can also turn corners faster and more smoothly than a passenger car. Also, a sports car generally gets better gas mileage than an ordinary passenger car.

Which of these is the reason that a sports car can turn a corner more easily than passenger cars?

5.9% ○ Compact size and disc brakes
4.2 ○ Coil suspension and power steering
75.9 ● Small size and low center of gravity
3.8 ○ Great length and minimum of accessories
3.2 ○ Road-gripping lines and heavy shock absorbers

5.9 ○ I don't know.
1.1 No Answer.

17. Read the passage and answer the question which follows it.

"For a 12-year-old, I've been around a lot because my father's in the Army. I have been to New York and to Paris. When I was nine, my parents took me to Rome. I didn't like Europe very much because the people don't speak the same language I do. When I am older my mother says I can travel by myself. I think I will like that. Ever since I was 15 I have wanted to go to Canada."

Why can't everything this person said be true?

8.9% ○ 12-year-olds can't travel alone.
4.5 ○ No one can travel that much in 12 years.
81.1 ● There is a conflict in the ages used in the passage.

4.8 ○ I don't know.
0.8 No Answer

18. What is the BEST way to find out if there is something about Eskimos in a book?

77.6% ● Look in the index.
7.3 ○ Look in the glossary.
7.1 ○ Look at the title page.
0.9 ○ Look through all the pages.
6.4 ○ Skim through the introduction.

0.3 ○ I don't know.
0.3 No Answer.

19. Read the passage and answer the question which follows it.

Johnny told Billy that he could make it rain any time he wanted to by stepping on a spider. Billy said he couldn't. Johnny stepped on a spider. That night it rained. The next day Johnny told Billy, "That proves I can make it rain any time I want to."

Was Johnny right?

12.3% ○ Yes
58.6 ● No
27.9 ○ Can't tell from the passage

1.0 ○ I don't know.
0.2 No Answer

20. Read the table of contents from a weekly news magazine and answer the questions which follow it.

Art	54	People	37
Books	82	National	11
Business	71	Press	66
Cinema	81	Science	51
Education	38	Sports	60
Law	52	Television	45
Medicine	59	Theater	64
Music	46	World	24

A. Under what heading would you look to locate the reviews of a current movie?

44.6% ● Cinema
2.0 ○ Business
40.5 ○ Theater
9.0 ○ Television

3.2 ○ I don't know
0.7 No Answer.

20. (Continued)

B. On which page would you find science news?

0.4% ○ 37
95.5 ● 51
0.7 ○ 64
1.0 ○ 81

1.9 ○ I don't know
0.4 No Answer

C. Which article would you be MOST likely to find in this magazine?

7.4% ○ "The Life of Lou Gehrig"
2.8 ○ "How to Become a Golf Expert"
4.4 ○ "A History of Baseball in America"
73.3 ● "Outstanding Sports Events of the Week"

10.6 ○ I don't know
1.5 No Answer

21. Read the story carefully so that you can answer the questions on the next page without looking back at the story.

It was morning, and James Douglas awoke frightened. Perhaps it was because the light had not been turned on, and the morning city light itself was gray and cold, hardly different from early evening. Maybe it was because of the three old women, one bending over the sink, one standing against the wall opposite his bed, one sitting at the table, her head bent over an empty dish. Maybe it was because he had been thinking about how to run away from school when he went to bed the night before. Maybe it was because it was a cold November Monday in Brooklyn. He closed his eyes and pretended to sleep.

21. (Continued)

Answer the following questions without referring to the story. *

A. In what city does the story take place?

_____

B. In what month does the story take place?

_____

C. On what day does the story take place?

_____

*This question was not multiple choice. Student's written answers were grouped and scored as follows (x indicates the right answer):

A.	83.0%	x	Brooklyn; New York; or New York City
	2.8		Any other answer
	9.0		I don't know
	5.2		No Answer
B.	82.7%	x	November
	6.1		Any other answer
	6.9		I don't know
	4.4		No Answer
C.	68.6%	x	Monday
	10.5		Any other answer
	14.6		I don't know
	6.3		No Answer

FIGURE 8

ASSESSMENT EXERCISES

AND RESPONSES

AGE 17

1. Read the passage and answer the question which follows it.

I Skiing has recently become one of the more popular sports in the United States. Because of its popularity, thousands of winter vacationers are flying north rather than south. In many areas, reservations are required months ahead of time.

II I discovered the accommodation shortage through an unfortunate experience. On a sunny Saturday morning I set out from Denver for the beckoning slopes of Aspen, Colorado. After passing signs for other ski areas, I finally reached my destination. Naturally I lost no time in heading for the nearest tow. After a stimulating afternoon of miscalculated stem turns I was famished. Well, one thing led to another and it must have been eight o'clock before I concerned myself with a bed for my bruised and aching bones.

III It took precisely one phone call to ascertain the lack of Lodgings in the Aspen area. I had but one recourse. My auto and I started the treacherous jaunt over the pass and back toward Denver. Along the way, I went begging for a bed. Finally a jolly tavernkeeper took pity and for only thirty dollars a night allowed me the privilege of staying in a musty, dirty, bathless room above his tavern.

Which paragraph or paragraphs in the passage are written from a personal point of view?

4.6% ○ Paragraph I
9.3 ○ Paragraph II
5.1 ○ Paragraph III
2.9 ○ Paragraphs I and II
● Paragraphs II and III

0.9 ○ I don't know
2.2 No Answer

2. Which sign shows where walking is permitted?

1.3% ○

97.2% ●

0.4% ○

0.3% ○

0.1% ○ I don't know
0.6 No Answer.

1. Skim the information given below and then complete the sentences on the next two pages.

Nuclear Bursts

An air burst is defined as one in which the bomb is exploded in the air so high above land or water that the fireball (at maximum brilliance) does not touch the surface. Great blast and heat hazards are produced. The heat wave resulting from the explosion of a one-megaton nuclear weapon can cause moderately severe burns of exposed skin as far as 12 miles from the point of detonation. The warmth may be felt at a distance of 75 miles. Practically no early or close-in fallout is produced.

In a surface burst, the ball of fire touches the ground. Because of its intense heat, large amounts of rock, soil, and other materials will be vaporized and will rise up into the cloud. An important difference between a surface burst and an air burst is that in the surface burst the atomic cloud is much more heavily loaded with the vaporized material; therefore, a surface burst causes much more early radioactive fallout than an air burst.

A subsurface burst is one in which the center of a nuclear explosion occurs under the ground or under water. Underground or underwater shock is produced. According to the depth at which the explosion occurs, some of the shock will escape to produce air blast. Much of the heat wave and immediate nuclear radiation is absorbed within a short distance by the water or ground. However, large amounts of earth or water near the explosion will be contaminated with radioactive material.

1. (Continued)

A. In this article nuclear bursts are typed according to

6.7%	○	the amount of damage done to the earth's surface.
20.3	○	the amount of radioactive fallout produced.
8.9	○	where the fireball touches the earth's surface.
59.6	●	where the fireball is in relation to the earth's surface.
3.2	○	I don't know.
1.3		No Answer.

Not reported by N.A.

B. Immediate danger from radioactive fallout is most likely to occur after

12.4%	○	an air burst.
71.0	●	a surface burst.
3.7	○	an underwater burst.
7.7	○	an underground burst.
2.0	○	I don't know.
3.2		No Answer.

1. (Continued)

C. The intense heat of a nuclear air burst can cause skin burns and fires

76.4%	●	several miles from the point of detonation.
6.0	○	only within a mile's radius of the point of detonation.
1.8	○	only when it is not raining within the area of explosion.
1.1	○	in areas which are only north or west of the point of detonation.
5.4	○	I don't know.
9.3		No Answer.

Read the sentence and fill in the oval beside the group of words which tells what the sentence means.

"I certainly won't miss that movie."

4.0% ○ I like that movie.
80.5% ● I'm going to that movie.
7.3% ○ I'm not going to that movie.
4.4% ○ I hope I'll see that movie, but I don't know if I can.
1.9% ○ I didn't see that movie, although it was here all fall.

1.0% ○ I don't know.
1.1% No Answer.

Here is part of an index page from a science book.

On which pages would you find information about earthworms?

water, 52-60 65, 140-152
weather, 60, 70-75
weeds, 15-20
wheat, 32-36
wind, 66-75
wire, 200-210, 212, 214
wool, 6-10
wolves, 3, 5, 10
worms, 195-196

0.2% ○ 5, 10
0.1% ○ 16, 17
0.2% ○ 34, 35
98.7% ● 195, 196
0.1% ○ 207, 208

0.5% ○ I don't know.
0.2% No Answer.

Read the poem and answer the question which follows it.

SEA FEVER

I must go down to the seas again, to the lonely sea and the sky,
And all I ask is a tall ship and a star to steer her by;
And the wheel's kick and the wind's song and the white sail's
shaking,
And a grey mist on the sea's face and a grey dawn breaking.

I must go down to the seas again, for the call of the running tide
Is a wild call and a clear call that may not be denied;
And all I ask is a windy day with the white clouds flying,
And the flung spray and the blown spume, and the sea-gulls crying.

I must go down to the seas again, to the vagrant gypsy life,
To the gull's way and the whale's way where the wind's like a
whetted knife;
And all I ask is a merry yarn from a laughing fellow-rover,
And a quiet sleep and a sweet dream when the long trick's over.

In which order does the poet ask for the following three things?

4.2% ○ Companionship, sailing weather, a ship
78.8% ● A ship, sailing weather, companionship
6.8% ○ A ship, companionship, sailing weather
1.7% ○ Sailing weather, companionship, a ship
4.3% ○ Sailing weather, a ship, companionship

1.2% ○ I don't know.
1.2% No Answer.

Read the passage and answer the questions on the next two pages.

POISON IVY

The interval for burning, itching, and finally water-filled blisters to appear varies a great deal. This, again, may depend on some differences in human skin, and the symptoms of dermatitis can develop within a few hours or even days later. The most important factor in using any remedy or treatment is TIME. Unless you can wash the poisonous sap away within 5 to 10 minutes after exposure, you are likely to be in trouble. Wash the entire body at once with any bland soap and then change clothing which must be laundered before being worn again. It is, of course, very obvious that washing is not always possible immediately after known contact with such irritating plants, and a tub or shower after outdoor activity is generally too late to avoid dermatitis if you have been exposed to or in contact with poison ivy. The blister fluid associated with ivy poisoning does not spread the irritation, but it is the oily, poisonous resin which is transferred to other skin areas by rubbing or scratching.

There are some simple preparations for treatment of ivy poisoning. An easily prepared "remedy" can be made by using equal parts of baking soda and cornstarch with enough water to form a paste or a lotion. Wet packs of boric acid are helpful in case of severely poisoned eyelids and swollen eyes. Calamine lotion can be used to soothe the discomfort of itching, burning skin. Preparations containing iron salts are likely to cause permanent tattoo effects, especially if skin in the area of application is broken.

(Continued)

A. Which of the following is essential to avoid ivy dermatitis once a person is exposed to poison ivy?

0.3% ○ Cut down the ivy plant.
6.7 ○ Do not scratch the affected areas.
1.3 ○ Put calamine lotion on the affected areas.
1.1 ○ Put iron salt solution on the exposed areas.
89.9 ● Wash all exposed areas within about five minutes of exposure.

0.2 ○ I don't know.
0.5 No Answer.

B. Which of the following will soothe the itching from ivy poisoning?

0.2% ○ Cut down the ivy plant.
2.4 ○ Do not scratch the affected areas.
90.1 ● Put calamine lotion on the affected areas.
2.2 ○ Put iron salt solution on the exposed areas.
2.8 ○ Wash all exposed areas within about five minutes of exposure.

0.9 ○ I don't know.
1.3 No Answer.

(Continued)

C. What should you do if the ivy poisoning affects your eyelids?

1.6% ○ Apply calamine lotion.
1.1 ○ Apply iron salt solution.
2.5 ○ Apply mild soap solution.
82.9 ● Apply wet packs of boric acid solution.
8.3 ○ Apply a paste of baking soda and cornstarch.

2.0 ○ I don't know.
1.7 No Answer.

Read the verse and fill in the oval beside the object described in the verse.

I have two eyes and when I'm worn
I give the wearer four.
I'm strong or weak or thick or thin--
Need I say much more?

0.5% ○ Clock
97.6 ● Eyeglasses
0.4 ○ Piano
0.8 ○ Thermometer

0.5 ○ I don't know.
0.2 No Answer.

Read the passage and answer the questions which follow it.

One spring Farmer Brown had an unusually good field of wheat. Whenever he saw any birds in this field, he got his gun and shot as many of them as he could. In the middle of the summer he found that his wheat was being ruined by insects. With no birds to feed on them, the insects had multiplied very fast. What Farmer Brown did not understand was this: A bird is not simply an animal that eats food the farmer may want for himself. Instead, it is one of many links in the complex surroundings, or environment, in which we live.

How much grain a farmer can raise on an acre of ground depends on many factors. All of these factors can be divided into two big groups. Such things as the richness of the soil, the amount of rainfall, the amount of sunlight, and the temperature belong together in one of these groups. This group may be called non-living factors. The second group may be called living factors. The living factors in any plant's environment are animals and other plants. Wheat, for example, may be damaged by wheat rust, a tiny plant that feeds on wheat, or it may be eaten by plant-eating animals such as birds or grasshoppers.

It is easy to see that the relations of plants and animals to their environment are very complex, and that any change in the environment is likely to bring about a whole series of changes.

A. What does this passage suggest a good farmer should understand about nature?

1.2% ○ Insects are harmful to plants.

4.1 ○ Birds are not harmful to plants.

7.6 ○ Wheat may be damaged by both animals and other plants.

6.8 ○ The amount of wheat he can raise depends on two factors: birds and insects.

79.1 ● A change in one factor of plants' surroundings may cause other factors to change.

0.7 ○ I don't know.

0.6 No Answer.

9. (Continued)

B. What important idea about nature does the writer want us to understand?

0.3% ○ Farmer Brown was worried about the heavy rainfall.

1.3 ○ Nobody needs to have such destructive birds around.

0.2 ○ Farmer Brown didn't want the temperature to change.

1.1 ○ All insects need not only wheat rust but grasshoppers.

95.0 ● All living things are dependent on other living things.

0.7 ○ I don't know.

1.3 No Answer.

10. Here is a recipe for making muffins. Read the recipe and answer the question which follows it.

ENGLISH MUFFINS

1 package active dry yeast
½ cup warm water
1½ cups milk, scalded
2 tablespoons sugar
2 teaspoons salt
¼ cup shortening
5¾ to 6 cups sifted all-purpose flour

Soften yeast in water. Combine next 4 ingredients; cool to lukewarm. Stir in 2 cups flour; beat well. Add yeast; mix. Add enough of remaining flour to make a moderately stiff dough. Turn out on a lightly floured surface; knead till smooth (8 to 10 minutes). Place in lightly greased bowl, turning dough once. Cover; let rise till double (1¼ hours).

After softening the yeast in the water, what 4 ingredients are combined next?

36.0% ● Scalded milk, sugar, salt, shortening

5.0 ○ Yeast, warm water, scalded milk, sugar

3.0 ○ 2 cups flour, scalded milk, sugar, salt

3.1 ○ 2 cups flour, warm water, scalded milk, sugar

50.6 ○ None of the above

1.3 ○ I don't know.

0.9 No Answer.

11. Read the story and answer the question which follows it.

After two weeks of unusually high-speed travel we reached Xeno, a small planet whose population, though never before visited by Earthmen, was listed as "friendly" in the Interstellar Gazetteer.

On stepping lightly (after all, the gravity of Xeno is scarcely more than twice that of our own moon) from our spacecraft we saw that "friendly" was an understatement. We were immediately surrounded by Frangibles of various colors, mostly pinkish or orange, who held out their "hands" to us. Imagine our surprise when their "hands" actually merged with ours as we tried to shake them!

Then, before we could stop them (how could we have stopped them?), two particularly pink Frangibles simply stepped right into two eminent scientists among our party, who immediately lit up with the same pink glow. While occupied in this way, the scientist reported afterwards, they suddenly discovered they "knew" a great deal about Frangibles and life on Xeno.

Apparently Frangibles could take themselves apart atomically and enter right into any other substance. They communicated by thought waves, occasionally merging "heads" for greater clarity. Two Frangibles who were in love with each other would spend most of their time merged into one; they were a bluish-green color unless they were having a lover's quarrel, when they turned gray.

Which one of the following seems to be FALSE?

36.5% ○ The Frangibles had been visited before.

3.2 ○ Space travel had progressed a great deal.

3.9 ○ Xeno was a considerable distance from Earth.

40.8 ● Earthmen were the only creatures to have traveled in space.

8.6 ○ There was cooperation between inhabitants of various planets.

5.2 ○ I don't know.

1.9 No Answer.

12. Read the paragraph and answer the questions which follow it.

> Any attempt to label an entire generation is unrewarding, and yet the generation which went through the last war, or at least could get a drink easily once it was over, seems to possess a uniform, general quality which demands an adjective. It was John Kerouac, the author of a fine, neglected novel, "The Town and the City," who finally came up with it. It was several years ago, when the face was harder to recognize, but he had a sharp, sympathetic eye, and one day he said, "You know, this is really a beat generation." The origins of the word "beat" are obscure, but the meaning is only too clear to most Americans. More than mere weariness, it implies the feeling of having been used, of being raw. It involves a sort of nakedness of mind, and, ultimately, of soul, a feeling of being reduced to the bedrock of consciousness. In short, it means being undramatically pushed up against the wall of oneself. A man is beat whenever he goes for broke and wagers the sum of his resources on a single number, and the young generation has done that continually from early youth.

A. What is the MAIN point of the paragraph?

25.3% ○ The beat generation
35.3 ○ The labeling of a past generation
37.2 ● The definition of the word "beat"

1.8 ○ I don't know.
0.4 No Answer.

12. (Continued)

B. Where would you MOST likely find this paragraph?

3.8% ○ In the encyclopedia
61.1 ● In a collection of essays
1.0 ○ On a sports page
29.1 ○ In the Dictionary of American Slang

3.9 ○ I don't know.
1.0 No Answer

C. What does the writer suggest when he mentions a "fine, neglected novel"?

3.2% ○ Kerouac had the right idea about the war.
12.9 ○ Kerouac had a clear understanding of the new post-war generation.
75.6 ● Kerouac had not received the recognition of "The Town and the City" that was deserved.

6.3 ○ I don't know.
2.0 No Answer

D. According to the paragraph, the origins of the word "beat" are

69.3% ● obscure.
20.3 ○ clear to Americans.
4.0 ○ attributed to Kerouac.
1.4 ○ attributed to jazz musicians.

2.0 ○ I don't know.
2.9 No Answer

13. Look at the following report card. According to the report card, in what subject area did the student do BEST?

JONES, RICHARD — STUDENT NAME
1009028423 — STUDENT NUMBER
10 — GRADE
0015 — HOME ROOM

REPORT CARD

HILLARD HIGH — SCHOOL NAME
PERIOD ENDING 11/15/69
TO INTERPRET MARKS SEE BELOW

NUMBER	NAME	MARK	TEACHER
01	SPAN 5B/6B	A	G1560 ZUCKER
02	LIFE SCI	B	R1480 MARCOTT
03	INT ENG 3 4	B+	T0150 B. SMITH
04	B3RS PE 10	C	P7010 CAIN
05	SCI/CUR EVENTS	C	S1150 RABINOWITZ
06	ALG 1B 2B	C	H1250 HOWES

JONES, RICHARD — STUDENT NAME
1009028423 — STUDENT NUMBER
GPA THIS PERIOD 2.80
GPA THIS SEMESTER

TO THE PARENTS OF
JONES, RICHARD
722 HENLEY ST
SANTA ROSA CA 95404

LEGEND

SCHOLASTIC MARKS

A OUTSTANDING
B GOOD
C SATISFACTORY
D MINIMUM ACHIEVEMENT
F FAILING
I INCOMPLETE
NM NO MARK
CR CREDIT
WP WITHDRAW PASSING
WF WITHDRAW FAILING
P PASSING

CITIZENSHIP COMMENTS CODE

0 STUDENT DOING EXCELLENT WORK
1 STUDENT IS PROGRESSING SATISFACTORILY
2 STUDENT IS IMPROVING IN THIS COURSE
3 STUDENT ACHIEVING BELOW APPARENT ABILITY
4 BOOKS OR MATERIALS NOT BROUGHT TO CLASS
5 ASSIGNMENTS ARE NOT COMPLETED REGULARLY
6 POOR ATTENDANCE IS AFFECTING SCHOOL WORK
7 STUDY HABITS NEED IMPROVING
8 BEHAVIOR NEEDS IMPROVING
9 PLEASE CONTACT TEACHER THROUGH COUNSELOR

13. (Continued)

1.3% ○ English
93.0 ● Foreign language
0.6 ○ Mathematics
4.0 ○ Science

0.6 ○ I don't know.
0.4 No Answer

14. Read the poem and answer the questions which follow it.

Fortune and Men's Eyes

Shakespeare

1 When, in disgrace with fortune and men's eyes,
2 I all alone beweep my outcast state,
3 And trouble deaf heaven with my bootless cries,
4 And look upon myself and curse my fate,
5 Wishing me like to one more rich in hope,
6 Featured like him, like him with friends possessed
7 Desiring this man's art, and that man's scope,
8 With what I most enjoy contented least,
9 Yet in these thoughts myself almost despising,
10 Haply I think on thee, and then my state,
11 Like to the lark at break of day arising
12 From sullen earth, sings hymns at heaven's gate;
13 For thy sweet love remembered, such wealth brings
14 That then I scorn to change my state with kings.

A. In Line 3, "deaf heaven" refers to a

17.7% ⊂⊃ quiet place.
12.9 ⊂⊃ troubled place.
62.5 ⊂● God who does not hear.
4.1 ⊂⊃ Heaven for deaf people.

2.6 ⊂⊃ I don't know.
0.1 No Answer.

14. (Continued)

B. What saves this man from wishing to be different than he is?

5.0% ⊂⊃ "Such wealth brings"
7.0 ⊂⊃ "Hymns at heaven's gate"
9.1 ⊂⊃ "The lark at break of day"
62.4 ⊂● "Thy sweet love remembered"
11.2 ⊂⊃ "Change my state with kings"

4.6 ⊂⊃ I don't know.
0.8 No Answer

15. Read the table of contents from a weekly news magazine and answer the questions which follow it.

Art	54	People	37
Books	82	National	11
Business	71	Press	66
Cinema	81	Science	51
Education	38	Sports	60
Law	52	Television	45
Medicine	59	Theater	64
Music	46	World	24

A. Under what heading would you look to locate the reviews of a current movie?

72.6% ⊂● Cinema
0.6 ⊂⊃ Business
22.8 ⊂⊃ Theater
3.1 ⊂⊃ Television

0.5 ⊂⊃ I don't know.
0.3 No Answer

15. (Continued)

B. On which page would you find science news?

0.3% ⊂⊃ 37
98.6 ⊂● 51
0.4 ⊂⊃ 64
0.2 ⊂⊃ 81

0.1 ⊂⊃ I don't know.
0.4 No Answer.

C. Which article would you be MOST likely to find in this magazine?

7.8% ⊂⊃ "The Life of Lou Gehrig"
1.8 ⊂⊃ "How to Become a Golf Expert"
3.1 ⊂⊃ "A History of Baseball in America"
74.6 ⊂● "Outstanding Sports Events of the Week"

10.0 ⊂⊃ I don't know.
2.7 No Answer.

16. Read the paragraph and complete the sentences which follow it.

> Instructions for Federal Income Tax
>
> Form 1040, 1969.
>
> Changes in Marital Status. – If you are married at the end of your taxable year, you are considered married for the entire year. If you are divorced (and not remarried) or legally separated on or before the end of your taxable year, you are considered single for the entire year.

A. A couple is married in December 1967, and divorced on January 15, 1969. For the purpose of their tax return for the year 1969, they are considered

28.3% married.
70.3 single.

Not reported by N.A.

0.9 I don't know.
0.4 No Answer

16. (Continued)

B. The same couple may

14.5% file a joint return for 1970.
78.7 not file a joint return for 1970.

Not reported by N.A.

6.0 I don't know.
0.8 No Answer

C. They could

82.1% have filed a joint return for 1967.
12.2 not have filed a joint return for 1967.

4.6 I don't know.
1.1 No Answer

17. Read the passage and complete the sentences which follow it.

> NOTICE
>
> This film will be replaced with an equivalent amount of unexposed Edmo film if found defective in manufacture, labeling, or packaging, or if damaged or lost by us or any subsidiary company even though by negligence or other fault. Except for such replacement, this film is sold and will be accepted for processing or any other purpose without warranty or liability. Since color dyes may change in time, this film will not be replaced for, or otherwise warranted against, any change of color.

A. If the film is damaged by a subsidiary company by negligence,

90.5% the film will be replaced.
8.7 the film will not be replaced.

0.5 I don't know.
0.3 No Answer.

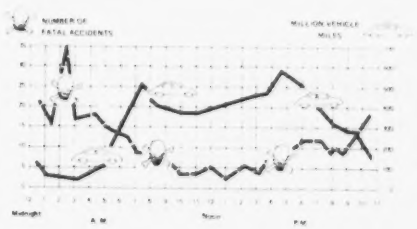
B. The film will not be replaced for any change in color because

1.3% color dyes never change.
94.8 color dyes change in time.
1.3 the film is not color film.
1.1 the company does not do the coloring itself.

0.7 I don't know.
0.7 No Answer.

18. Read the passage and look at the chart, then complete the sentence below it.

> This chart shows the number of fatal accidents (broken lines) and the number of vehicle miles (solid lines) in California, arranged according to the hour of the day.



Most fatal accidents occurred between

9.1% 1 a.m. and 2 a.m.
78.4 2 a.m. and 3 a.m.
2.3 4 a.m. and 5 a.m.
2.5 6 a.m. and 7 a.m.
2.6 7 a.m. and 8 a.m.

3.5 I don't know.
1.5 No Answer.

18. Read the story on the opposite page so that you can complete the sentence below.

The title which tells most about this story is

11.5 ○ "Painted Easter Eggs."
73.0 ● "Easter Eggs in the Past."
1.3 ○ "Easter Eggs in Scotland."
12.4 ○ "Easter Eggs in King Edward's Day."

0.7 ○ I don't know.
1.0 No Answer

19. (Continued)

Almost seven hundred years ago, King Edward of England bought 450 Easter eggs painted gold and other bright colors. He paid about 18 cents for all of them. Prices have gone way up since then. Easter eggs have been made not only from real eggs. Some of the most beautiful were fancy oval-shaped objects of silver and enamel, colorful stones or glass. Many had ribbons, beads, or feathers on them. Some of the tastiest looking eggs could not be fried or boiled. They were made of chocolate or of sugar-filled candy. During the 19th century, candy eggs with a window at one end and tiny scenes inside were given as gifts. In England messages and dates were written on the eggs, and in Scotland children were given hard-boiled eggs as toys on Easter Sunday.

20. Read the story and answer the question which follows it.

In the past, flies were a lot bigger than they are now. My father used to throw rocks at them. My grandfather used to shoot them with a gun. And my great grandfather told me that it used to take five men, a dog, two horses, and sixteen cats to drag a single fly out of the kitchen.

Which explanation tells BEST how the writer makes this story funny?

5.8 ○ By using humorous sentence structure.
76.7 ● By exaggerating the size of the flies.
10.6 ○ By putting the events in some past time so the story becomes unreal.
5.7 ○ By making the last sentence of the paragraph much longer than the rest.

0.8 ○ I don't know.
0.3 No Answer

Read the following story only once so that you can answer the questions on the next page without looking back at the story.

It was morning, and James Douglas awoke frightened. Perhaps it was because the light had not been turned on, and the morning city light itself was gray and cold, hardly different from early evening. Maybe it was because of the three old women, one bending over the sink, one standing against the wall opposite his bed, one sitting at the table, her head bent over an empty dish. Maybe it was because he had been thinking about how to run away from school when he went to bed the night before. Maybe it was because it was a cold November Monday in Brooklyn. He closed his eyes and pretended to sleep.

21. (Continued)

Answer the following questions without referring to the story. *

A. How many women were in the room when James awoke?

_____

B. What had James been thinking about when he went to bed the night before?

_____

*This question was not multiple choice. Student's written answers were grouped and scored as follows (x indicates the right answer):

A.	92.0%	x	Three (3)
	5.6		Any other answer
	0.8		I don't know
	1.6		No Answer
B.	84.0%	x	Not going to school. Running away from school. How to cut school. How to get out of going to school. Running away. How to run away. Leaving home. Running away from home.
	6.6		Any other answer
	4.8		I don't know
	4.5		No Answer

FIGURE 9

SOC DEFINITIONS

CONNECTICUT

SOC	DEFINITION
1	"Big Cities." Towns of more than 100,000 population.
2	"Fringe Cities." Towns whose borders are contiguous with Big Cities and whose population exceeds 10,000.
3	"Medium Cities." Towns of more than 25,000 population.
4	"Smaller Places." All other towns.

NATIONAL ASSESSMENT

1	"Big Cities." All central cities of the U.S. with a population of 200,000 or greater.
2	"Urban Fringe." For each county containing a city in the Big City category, the region of the county not within the city limits, plus all counties within the same Standard Metropolitan Statistical Area (SMSA) as the Big City.
3	"Medium-sized Cities," All SMSA counties not included in Big Cities or Fringes SOC categories plus all counties which contain at least one city of 25,000 people or more. If such a city was part of more than one county, the county with a majority of the city population was included here.
4	"Smaller Places." All counties and combinations of counties with a population under 25,000 not included in the above categories.

TABLE 4

CONNECTICUT P VALUES - AGE 9
(PERCENTAGE CORRECT)

ITEM NO.	DESCRIPTION	RESPONSE GROUP CONN	MALE	FEM	SOC 1	SOC 2	SOC 3	SOC 4
1.	*The title of the story should be "Easter Eggs in the Past."*	27.0	26.5	27.5	14.4	34.7	27.0	29.8
2.	*The mood of the story is "Frightening."*	78.4	74.9	81.9	62.0	83.2	82.5	82.8
3.	*The title of a book which is not about people is "All About Elephants."*	72.6	70.8	74.4	57.7	78.9	73.1	77.9
4.	*In the passage, the nonsense word "Zup" means water.*	85.0	82.4	87.5	68.8	92.0	87.0	89.1
5.	*The story gives three reasons for wanting a dog rather than a cat.*	84.2	80.3	88.0	63.1	93.4	87.9	88.5
6.	*In the picture, "the dog on the leash has spots on it."*	88.5	86.2	90.7	75.9	95.4	88.2	92.2
7.	*The words "a new ball", best completes the sentence.*	91.2	89.2	93.2	76.9	96.2	93.6	95.5
8.	*For Story 2 to end like Story 1, "Mary and the young man would get married."*	74.5	70.9	77.9	52.5	83.7	76.5	81.0
9.	*The passage indicates that the person who is speaking "likes spy stories."*	79.2	75.4	82.9	60.4	87.4	81.1	84.5
10.	*You would probably see a sign about Horsepower "on a highway."*	19.6	23.5	15.8	19.5	20.1	19.7	19.1
11.	*To find Mr. Jones in the telephone book you would look between "Johnson and Judson."*	70.0	67.0	73.0	55.8	77.8	72.3	71.6
12.	*If you needed to take a bus home, you would look for the sign "bus stop."*	98.0	97.9	98.1	94.3	99.4	98.5	99.2

TABLE 4 (CONT'D)

ITEM NO.	DESCRIPTION	RESPONSE GROUP CONN	MALE	FEM	SOC 1	SOC 2	SOC 3	SOC 4
13.	*To find information about "windmills", it would be best to look in the encyclopedia.*	65.1	61.7	68.5	41.8	75.8	63.7	74.9
14.	*Select the figure in which three lines cross each other.*	93.3	93.2	93.4	86.0	96.6	93.9	95.5
15.	*To find out if there is something about Eskimos in a book, you would "look in the index."*	56.1	55.7	56.5	30.6	72.3	56.8	60.4
16.	*"Classroom" is a compound word.*	94.6	93.0	96.2	87.6	97.7	96.4	95.5
17.	*The drawing shows that "a sign is hanging on the door."*	93.0	91.2	94.7	81.7	97.5	95.5	95.2
18A.	*The main idea of the passage is "all living things are affected by living things."*	34.4	30.1	38.6	17.8	46.5	33.0	37.5
18B.	*The passage points out the importance of the fact that "any change in the environment is likely to cause other changes."*	31.5	27.7	35.2	14.9	42.8	29.6	35.7
18.	*Zero correct.*	53.2	58.0	48.5	73.5	41.2	53.4	48.3
18.	*One correct.*	27.7	26.3	29.2	20.4	28.2	30.7	30.1
18.	*Two correct.*	19.1	15.8	22.3	6.1	30.5	16.0	21.6
19.	*You can tell that the story of Amos the Ant is make-believe because "Ants don't give people food."*	80.0	76.2	83.7	60.2	90.1	81.3	84.8
20.	*According to the labels, select the type of dog food which has more protein.*	64.8	63.7	65.8	68.5	66.5	61.5	63.4
21.	*The main purpose in this story is to "create an imaginary space story."*	40.4	40.6	40.1	22.4	52.5	37.5	45.9

TABLE 5

CONNECTICUT P VALUES - AGE 13
(PERCENTAGE CORRECT)

ITEM NO.	DESCRIPTION	RESPONSE GROUP						
		CONN	MALE	FEM	SOC 1	SOC 2	SOC 3	SOC 4
1.	*"I certainly won't miss that movie" could also be written, "I'm going to that movie."*	73.7	70.6	76.7	72.7	73.0	73.9	75.1
2.	*Inside this cage is an extremely ferocious animal.*	97.2	97.0	97.5	93.7	98.7	97.8	98.4
3.	*According to the story, "Earthmen were the only creatures to have traveled in space", seems to be a false statement.*	24.4	23.4	25.4	21.7	25.1	25.0	25.7
4.	*To find information about "windmills", it would be best to look in the encyclopedia.*	88.9	87.4	90.4	79.6	91.2	90.6	93.6
5.	*The author suggests his love for skiing in the second paragraph.*	37.5	38.8	36.4	34.8	36.3	37.4	41.3
6.	*According to the labels, select the type of dog food which has more protein.*	83.2	82.8	83.6	80.0	83.8	83.1	85.4
7.	*The report card covers the first reporting period.*	88.7	88.5	88.9	79.3	92.6	89.5	92.3
8A.	*To avoid ivy dermatitis once a person is exposed to poison ivy, one should "wash all exposed areas within about five minutes of exposure."*	69.3	66.5	71.9	46.5	80.9	73.3	74.4
8B.	*Putting calamine lotion on the affected areas will soothe the itching from poison ivy.*	80.4	77.6	83.2	62.0	87.4	83.7	87.0
8C.	*If the ivy poisoning affects your eyelids, you should apply wet packs of boric acid solution.*	65.2	59.9	70.3	51.2	71.1	66.5	70.5
8.	*Zero correct*	9.0	11.6	6.3	21.7	2.8	6.7	5.7

TABLE 5 (CONT'D)

ITEM NO.	DESCRIPTION	RESPONSE GROUP CONN	MALE	FEM	SOC 1	SOC 2	SOC 3	SOC 4
8.	*One correct.*	15.3	16.0	14.6	23.7	12.9	13.6	11.7
8.	*Two correct.*	27.7	29.1	26.3	27.9	26.3	29.3	27.6
8.	*Three correct.*	48.1	43.3	52.8	26.7	58.0	50.4	55.0
9.	*In the picture, "the dog on the leash has spots on it."*	94.5	93.9	95.0	90.4	96.6	94.6	95.8
10A.	*In the poem, "deaf heaven" refers to a "God who does not hear."*	28.4	26.7	30.0	21.8	31.5	28.3	31.0
10B.	*"Thy sweet love remembered" saves the man in the poem from wishing to be different than he is.*	34.4	30.3	38.4	30.0	30.0	37.2	40.7
10.	*Zero correct.*	49.8	52.9	46.7	55.5	50.5	48.4	45.0
10.	*One correct.*	37.7	37.1	38.1	37.1	37.5	37.7	38.2
10.	*Two correct.*	12.6	9.9	15.1	7.3	12.0	13.9	16.8
11.	*The drawing shows that "a sign is hanging on the door."*	98.5	97.9	99.1	98.9	98.6	98.9	97.9
12.	*According to the passage, the Persian Gulf has many "non-edible oysters that produce pearls."*	64.6	66.3	63.1	52.1	67.6	65.5	71.9
13A.	*It is false that "by car Northtown is closer to Rice Lake than to Hope."*	93.2	92.7	93.6	85.2	94.8	96.6	95.8
13B.	*It is true that "you can drive all the way from Northtown to Falls City on Highway 71."*	96.3	95.8	96.7	92.1	96.4	97.9	98.6
13C.	*It is true that "Hope is the town closest to Centerville."*	96.9	96.4	97.3	92.3	97.8	99.2	98.2

TABLE 5 (CONT'D)

ITEM NO.	DESCRIPTION	RESPONSE GROUP CONN	MALE	FEM	SOC 1	SOC 2	SOC 3	SOC 4
13D.	*It is false that "Centerville is farther west than Hope."*	91.7	92.5	91.0	81.1	96.6	93.2	94.9
13E.	*It is false that "Highway 20 runs on the south side of Rice River."*	77.6	77.7	77.6	61.4	80.5	84.1	84.1
13.	*Zero correct*	0.4	0.5	0.3	0.8	0.3	0.2	0.1
13.	*One correct.*	1.0	1.3	0.7	3.1	0.2	0.1	0.5
13.	*Two correct.*	1.8	1.6	2.1	6.5	0.6	0.5	0.1
13.	*Three correct.*	4.9	4.4	5.3	11.4	2.6	3.7	2.4
13.	*Four correct.*	23.4	23.9	23.0	29.3	24.5	18.5	20.8
13.	*Five correct.*	68.5	68.4	68.7	49.0	71.8	77.0	76.1
14.	*The title of a book which is not about people is "All About Elephants."*	85.0	84.0	86.0	65.7	94.9	87.1	90.5
15.	*The Spring Forma_ on Friday from 7:30 - 11:00 p.m. would fit your schedule.*	35.7	30.3	40.9	31.3	39.3	32.7	38.1
16.	*A sports car turns easier because of its "small size and low center of gravity."*	75.9	77.4	74.4	56.5	83.1	81.4	81.3
17.	*Everything that the person said about himself cannot be true because "there is a conflict in the ages used in the passage."*	81.1	76.8	85.2	69.2	84.8	82.3	86.9

TABLE 5 (CONT'D)

ITEM NO.	DESCRIPTION	RESPONSE GROUP						
		CONN	MALE	FEM	SOC 1	SOC 2	SOC 3	SOC 4
18.	*To find out if there is something about Eskimos in a book, you would "look in the index."*	77.6	74.3	80.9	64.7	84.7	77.2	82.1
19.	*Johnny was not right when he told Billy he could make it rain.*	58.6	57.2	59.9	65.0	56.4	60.0	54.1
20A.	*In the table of contents, you would look under "Cinema" to locate the reviews of a current movie.*	44.6	43.1	46.1	32.9	45.4	43.8	54.6
20B.	*According to the table of contents, science news is found on page "51".*	95.5	94.4	96.6	90.2	97.0	97.0	97.6
20C.	*The article you would most likely find in a weekly news magazine is "Outstanding Sports Events of the Week."*	73.3	72.4	74.2	68.9	76.2	74.2	73.7
20.	*Zero correct.*	2.8	3.6	2.1	6.5	2.2	1.8	1.1
20.	*One correct.*	15.6	15.1	16.0	20.0	14.6	15.7	12.6
20.	*Two correct.*	46.9	49.2	44.7	48.6	45.6	48.4	45.6
20.	*Three correct.*	34.7	32.1	37.2	24.9	37.6	34.2	40.7
21A.	*The story takes place in Brooklyn (or New York, or New York City).*	83.0	82.6	83.5	80.8	84.3	81.1	85.1
21B.	*The story takes place in November.*	82.7	80.4	84.9	81.8	82.0	83.2	83.7
21C.	*The story takes place on Monday.*	68.6	64.0	73.2	74.4	63.2	66.4	70.7

TABLE 5 (CONT'D)

ITEM NO.	DESCRIPTION	RESPONSE GROUP CONN	MALE	FEM	SOC 1	SOC 2	SOC 3	SOC 4
21.	*Zero correct.*	4.9	5.4	4.5	4.0	5.3	6.2	4.5
21.	*One correct.*	12.6	14.0	11.1	14.0	13.3	10.5	12.1
21.	*Two correct.*	20.6	23.5	17.9	13.4	23.8	25.5	20.1
21.	*Three correct.*	61.9	57.2	66.6	68.7	57.6	57.9	63.4

TABLE 6

CONNECTICUT P VALUES - AGE 17
(PERCENTAGE CORRECT)

NO.	DESCRIPTION	RESPONSE GROUP CONN	MALE	FEM	SOC 1	SOC 2	SOC 3	SOC 4
1.	*Paragraphs II and III are written about skiing from a personal point of view.*	75.0	71.2	78.8	59.8	82.9	72.1	79.1
2.	*The sign "Pedestrians Only" indicates where walking is permitted.*	97.2	96.6	97.8	95.4	97.7	96.3	98.7
3A.	*According to the article, nuclear bursts are typed according to "where the fireball is in relation to the earth's surface."*	59.6	60.0	59.2	47.9	63.5	54.9	67.3
3B.	*According to the article, immediate danger from fallout most likely occurs after "a surface burst."*	71.0	72.8	69.1	59.5	73.9	70.9	75.2
3C.	*According to the article, the intense heat of a nuclear air burst can cause skin burns and fires "several miles from the point of detonation."*	76.4	79.6	73.0	65.4	78.8	75.0	81.9
3.	*Zero correct.*	7.8	6.6	9.0	16.7	5.1	7.6	5.3
3.	*One correct.*	18.9	17.9	20.0	23.4	17.2	21.7	15.3
3.	*Two correct.*	31.8	32.0	31.5	30.4	34.1	33.1	29.1
3.	*Three correct.*	41.5	43.5	39.4	29.5	43.6	37.7	50.3
4.	*"I certainly won't miss that movie" could also be written, "I'm going to that movie."*	80.5	76.9	84.2	76.7	84.6	76.9	82.3
5.	*According to the index, you would look on pages 195 and 196 to locate information about earthworms.*	98.7	98.5	98.9	97.9	99.0	98.7	98.8

TABLE 6 (CONT'D)

ITEM NO.	DESCRIPTION	RESPONSE GROUP CONN	MALE	FEM	SOC 1	SOC 2	SOC 3	SOC 4
6.	*In the poem, "Sea-fever", the poet asks for "A ship, sailing weather, and companionship", in that order.*	78.8	73.0	84.9	69.4	84.2	74.3	83.7
7A.	*To avoid ivy dermatitis once a person is exposed to poison ivy, one should "wash all exposed areas within about five minutes of exposure."*	89.9	88.9	90.8	85.8	91.8	89.4	90.9
7B.	*Putting calamine lotion on the affected areas will soothe the itching from poison ivy.*	90.1	87.7	92.5	81.6	93.5	89.5	92.3
7C.	*If the ivy poisoning affects your eyelids, you should apply wet packs of boric acid solution.*	82.9	78.1	87.9	73.5	86.3	82.6	85.6
7.	*Zero correct.*	2.1	3.2	1.0	4.4	1.9	2.1	1.0
7.	*One correct.*	6.5	7.7	5.3	10.9	4.9	6.7	5.4
7.	*Two correct.*	17.8	20.2	15.2	24.1	13.2	18.9	17.4
7.	*Three correct.*	73.6	68.9	78.5	60.6	80.1	72.4	76.2
8.	*The answer to the riddle is "eyeglasses."*	97.6	96.4	98.8	95.6	98.3	96.9	98.8
9A.	*According to the passage, a good farmer should understand that "a change in one factor of plants' surroundings may cause other factors to change."*	79.1	78.1	80.1	65.1	83.9	77.2	84.5
9B.	*According to the passage, the author wants us to understand that "all living things are dependent on other living things."*	95.0	94.1	95.8	91.1	96.0	95.9	95.3
9.	*Zero correct.*	3.3	3.9	2.7	7.3	2.2	2.4	2.7

TABLE 6 (CONT'D)

ITEM NO.	DESCRIPTION	RESPONSE GROUP CONN	MALE	FEM	SOC 1	SOC 2	SOC 3	SOC 4
9.	*One correct.*	19.4	20.1	18.8	29.3	15.6	22.0	14.8
9.	*Two correct.*	77.3	76.1	78.6	63.4	82.2	75.6	82.5
10.	*According to the recipe for English muffins, after softening the yeast in water, you combine scalded milk, sugar, salt, and shortening.*	36.0	30.4	41.8	29.6	37.1	34.2	40.5
11.	*According to the story, "Earthmen were the only creatures to have traveled in Space", seems to be a false statement.*	40.8	39.0	42.7	32.9	47.0	36.6	43.7
12A.	*The main point of the paragraph is "the definition of the word 'beat'."*	37.2	35.5	38.9	39.1	36.4	37.2	36.8
12B.	*The paragraph would most likely be found "in a collection of essays."*	61.1	61.5	60.8	51.3	66.2	55.9	67.2
12C.	*A "fine, neglected novel" suggests that "Kerouac had not received the recognition of 'The Town and the City' that was deserved."*	75.6	71.4	80.0	67.1	80.1	72.7	79.2
12D.	*According to the paragraph, the origins of the word "beat" are "obscure."*	69.3	65.0	73.9	63.2	72.7	64.5	74.4
12.	*Zero correct.*	5.0	6.1	3.9	7.7	3.8	7.0	2.6
12.	*One correct.*	12.9	15.0	10.8	19.2	11.8	12.8	10.4
12.	*Two correct.*	27.2	28.5	25.8	26.8	23.4	31.0	27.3
12.	*Three correct.*	43.6	40.4	47.0	37.1	47.2	41.5	46.0
12.	*Four correct.*	11.3	10.1	12.5	9.1	13.7	7.8	13.6

TABLE 6 (CONT'D)

ITEM NO.	DESCRIPTION	RESPONSE GROUP CONN	MALE	FEM	SOC 1	SOC 2	SOC 3	SOC 4
13.	*According to the report card, the student did best in foreign languages.*	93.0	91.5	94.6	89.7	93.2	92.7	95.1
14A.	*In the poem, "deaf heaven" refers to a "God who does not hear."*	62.5	58.2	66.9	52.7	66.4	58.6	68.2
14B.	*"Thy sweet love remembered" saves tha man in the poem from wishing to be different than he is.*	62.4	52.5	72.7	56.2	64.6	56.1	70.0
14.	*Zero correct.*	21.1	26.1	15.8	30.0	19.3	24.9	13.8
14.	*One correct.*	33.0	37.0	28.8	31.1	30.5	35.4	34.2
14.	*Two correct.*	45.9	36.9	55.4	38.9	50.3	39.7	52.0
15A.	*In the table of contents, you would look under "Cinema" to locate the reviews of a current movie.*	72.6	71.8	73.4	57.9	77.4	70.2	79.0
15B.	*According to the table of contents, science news is found on page "51".*	98.6	98.2	99.0	97.5	99.1	98.1	99.2
15C.	*The article you would most likely find in a weekly news magazine is "Outstanding Sports Events of the Week".*	74.6	74.6	74.6	65.6	79.5	71.6	78.0
15.	*Zero correct.*	0.7	0.9	0.4	1.3	0.0	1.1	0.6
15.	*One correct.*	10.6	10.1	11.1	18.4	7.6	11.3	8.1
15.	*Two correct.*	31.0	32.5	29.4	38.3	28.7	34.3	25.7
15.	*Three correct.*	57.7	56.5	59.0	42.0	63.6	53.4	65.6

TABLE 6 (CONT'D)

ITEM NO.	DESCRIPTION	RESPONSE GROUP CONN	MALE	FEM	SOC 1	SOC 2	SOC 3	SOC 4
16A.	*According to the instructions, the couple is considered "single" for their 1969 tax return.*	70.3	68.7	72.0	71.9	69.6	69.1	71.3
16B.	*According to the instructions, the couple may "not file a joint return for 1970."*	78.7	76.3	81.2	75.9	79.7	77.9	80.2
16C.	*According to the instructions, the couple could "have filed a joint return for 1967."*	82.1	80.9	83.4	80.3	85.8	78.3	83.4
16.	*Zero correct.*	5.5	6.2	4.8	6.1	5.6	5.6	4.9
16.	*One correct.*	13.8	14.8	12.7	14.7	11.9	15.1	13.8
16.	*Two correct.*	24.8	26.0	23.4	24.2	24.3	27.6	22.8
16.	*Three correct.*	56.0	53.0	59.1	55.0	58.2	51.7	58.5
17A.	*According to the notice, "the film will be replaced" if it is negligently damaged by a subsidiary company.*	90.5	88.2	92.8	87.4	92.0	89.3	92.1
17B.	*According to the notice, the film will not be replaced for any change in color because "color dyes change in time".*	94.8	92.4	97.3	91.5	96.8	93.7	96.0
17.	*Zero correct.*	2.0	2.8	1.2	2.9	1.3	2.8	1.3
17.	*One correct.*	10.7	13.8	7.5	15.4	8.6	11.4	9.3
17.	*Two correct.*	87.3	83.4	91.3	81.8	90.1	85.7	89.4
18.	*According to the chart, most fatal accidents occur between "2 a.m. and 3 a.m.."*	78.4	79.8	76.9	65.5	81.7	78.7	82.6

TABLE 6 (CONT'D)

ITEM NO.	DESCRIPTION	RESPONSE GROUP CONN	MALE	FEM	SOC 1	SOC 2	SOC 3	SOC 4
19.	*The title of the story should be "Easter Eggs in the Past."*	73.0	70.0	76.3	59.6	78.7	71.3	77.3
20.	*The writer makes this story funny "by exaggerating the size of the flies."*	76.7	73.9	79.7	73.6	78.2	74.8	79.1
21A.	*According to the passage, when James awoke there were "three" women in the room.*	92.0	89.9	94.3	86.3	94.8	91.3	93.5
21B.	*According to the passage, when James went to bed the night before, he had been thinking about "how to run away from school."*	84.0	80.1	88.2	76.5	88.1	84.5	84.2
21.	*Zero correct*	2.0	2.6	1.4	4.5	0.8	1.8	1.9
21.	*One correct.*	15.4	18.6	12.0	19.6	12.0	15.9	15.5
21.	*Two correct.*	82.6	78.8	86.6	75.9	87.1	82.3	82.6

TABLE 7

COMPARISON OF CONNECTICUT AND NATIONAL ASSESSMENT P VALUES - AGE 9
(PERCENTAGE CORRECT)

ITEM NO.	CONN	NATL	NE	(C) MALE	(N) MALE	(C) FEM	(N) FEM	SOC 1(C)	1(N)	2(C)	2(N)	3(C)	3(N)	3*	4(C)	4(N)	4*
1.	27.0	26.0	29.7	26.5	25.8	27.5	26.3	14.4	26.8	34.7	32.2	27.0	26.6	26.0	29.8	21.1	29.4
2.	78.4	80.6	81.0	74.9	77.8	81.9	83.4	62.0	79.5	83.2	85.7	82.5	83.2	76.9	82.8	76.4	82.1
3.	72.6	73.3	77.5	70.8	71.1	74.4	75.4	57.7	73.4	78.9	77.7	73.1	75.3	70.5	77.9	69.1	77.7
4.	85.0	83.1	87.8	82.4	81.4	87.5	84.8	68.8	85.2	92.0	87.5	87.0	82.3	83.4	89.1	80.0	88.8
5.	84.2	83.0	85.1	80.3	80.8	88.0	85.4	63.1	81.7	93.4	86.8	87.9	83.2	82.6	88.5	81.5	88.2
6.	88.5	85.3	84.9	86.2	83.4	90.7	87.2	75.9	84.9	95.4	88.2	88.2	84.6	87.1	92.2	84.4	91.9
7.	91.2	88.1	91.3	89.2	86.6	93.2	89.6	76.9	86.1	96.2	94.0	93.6	88.2	89.5	95.5	86.4	95.4
8.	74.5	65.5	68.6	70.9	61.7	77.9	69.2	52.5	63.0	83.7	75.9	76.5	60.4	71.9	81.0	63.9	80.7
9.	79.2	75.2	77.8	75.4	72.3	82.9	78.0	60.4	76.1	87.4	78.3	81.1	73.3	77.3	84.5	73.7	84.0
10.	19.6	23.3	18.1	23.5	26.9	15.8	19.5	19.5	16.0	20.1	18.6	19.7	27.3	19.8	19.1	27.4	19.2
11.	70.0	62.5	66.4	67.0	58.2	73.0	66.6	55.8	54.3	77.8	75.7	72.3	62.8	69.6	71.6	59.7	71.0
12.	98.0	97.0	98.4	97.9	97.7	98.1	96.3	94.3	97.6	99.4	97.9	98.5	97.0	97.5	99.2	96.1	99.2
13.	65.1	57.4	66.5	61.7	57.6	68.5	58.2	41.8	58.1	75.8	69.0	63.7	57.7	61.5	74.9	50.8	74.2
14.	93.3	89.2	90.6	93.2	88.5	93.4	89.9	86.0	90.0	96.6	90.3	93.9	89.1	92.6	95.5	88.0	95.1
15.	56.1	48.4	52.9	55.7	46.6	56.5	50.1	30.6	42.4	72.3	56.5	56.8	48.4	54.5	60.4	47.9	60.0

*Connecticut data classified by NA definition of SOC.

TABLE 7 (CONT'D)

ITEM NO.	CONN	NATL	NE	(C) MALE	(N) MALE	(C) FEM	(N) FEM	SOC 1(C)	1(N)	2(C)	2(N)	3(C)	3(N)	3*	4(C)	4(N)	4*
16.	94.6	92.6	94.3	93.0	92.1	96.2	93.2	87.6	90.8	97.7	93.2	96.4	95.1	94.3	95.5	91.9	95.4
17.	93.0	88.8	90.5	91.2	86.0	94.7	91.5	81.7	87.7	97.5	91.4	95.5	89.6	92.0	95.2	87.2	95.2
18A.	34.4	26.9	28.3	30.1	25.5	38.6	28.4	17.8	28.1	46.5	29.8	33.0	28.2	33.4	37.5	24.2	36.8
18B.	31.5	24.5	23.3	27.7	23.5	35.2	25.5	14.9	20.3	42.8	32.6	29.6	23.2	29.9	35.7	23.2	35.4
18(0).	53.2	n.a.	n.a.	58.0	n.a.	48.5	n.a.	73.5	n.a.	41.2	n.a.	53.4	n.a.	54.8	48.3	n.a.	49.3
18(1).	27.7	n.a.	n.a.	26.3	n.a.	29.2	n.a.	20.4	n.a.	28.2	n.a.	30.7	n.a.	27.1	30.1	n.a.	29.2
18(2).	19.1	13.0	12.9	15.0	11.5	22.3	14.4	6.1	12.1	30.5	16.8	16.0	12.8	18.1	21.6	11.5	21.5
19.	80.0	75.2	79.9	76.2	71.8	83.7	78.7	60.2	75.5	90.1	82.4	81.3	74.1	78.2	84.8	71.8	84.5
20	64.8	67.4	69.1	63.7	69.1	65.8	65.8	68.5	67.4	66.5	67.3	61.5	70.5	65.4	63.4	65.8	63.3
21.	40.4	35.3	33.8	40.6	34.3	40.1	36.3	22.4	39.6	52.5	35.9	37.5	36.1	38.7	45.9	32.2	44.5

TABLE 8

COMPARISON OF CONNECTICUT AND NATIONAL ASSESSMENT P VALUES - AGE 13
(PERCENTAGE CORRECT)

ITEM NO.	CONN	NATL	NE	(C) MALE	(N) MALE	(C) FEM	(N) FEM	SOC 1(C)	1(N)	2(C)	2(N)	3(C)	3(N)	3*	4(C)	4(N)	4*
1.	73.7	76.1	74.9	70.6	72.0	76.7	80.4	72.7	68.3	73.0	73.3	73.9	76.9	73.0	75.1	81.6	75.4
2.	97.2	95.8	96.9	97.0	95.2	97.5	96.4	93.7	94.6	98.7	97.7	97.8	95.6	96.8	98.4	95.5	98.4
3.	24.4	24.5	26.1	23.4	26.0	25.4	23.1	21.7	25.0	25.1	23.8	25.0	29.3	23.6	25.7	22.8	26.4
4.	88.9	89.5	89.8	87.4	87.6	90.4	91.2	79.6	88.4	91.2	91.5	90.6	90.8	87.0	93.6	88.1	93.7
5.	37.5	35.1	37.8	38.8	34.3	36.4	35.9	34.8	30.2	36.3	37.5	37.4	35.0	35.7	41.3	36.7	41.9
6.	83.2	80.5	84.6	82.8	80.2	83.6	80.7	80.0	85.8	83.8	81.4	83.1	82.7	82.3	85.4	76.8	85.2
7.	88.7	82.0	88.0	88.5	80.1	88.9	84.0	79.3	73.9	92.6	88.4	89.5	82.1	87.1	92.3	82.3	92.4
8A.	69.3	77.2	78.2	66.5	73.5	71.9	80.4	46.5	77.8	80.9	78.3	73.3	80.7	67.2	74.4	74.2	74.2
8B.	80.4	78.8	84.9	77.6	73.6	83.2	83.4	62.0	79.2	87.4	86.5	83.7	80.2	77.6	87.0	72.7	87.2
8C.	65.2	65.0	69.9	59.9	57.7	70.3	71.4	51.2	64.8	71.1	69.5	66.5	68.0	62.9	70.5	60.5	70.7
8(0).	9.0	6.9	4.7	11.6	9.2	6.3	4.8	21.7	7.8	2.8	4.4	6.7	3.9	10.3	5.7	9.7	5.7
8(1).	15.3	15.4	11.5	16.0	19.8	14.6	11.4	23.7	13.6	12.9	11.4	13.6	15.7	16.9	11.7	18.8	11.4
8(2).	27.7	27.2	28.4	29.1	27.2	26.3	27.2	27.9	25.6	26.3	29.7	29.3	27.9	27.5	27.6	26.0	28.0
8(3).	48.1	50.4	54.9	43.3	43.5	52.8	56.4	26.7	52.3	58.0	54.5	50.4	52.5	45.2	55.0	45.5	54.9
9.	94.5	94.5	94.2	93.9	93.3	95.0	95.8	90.4	92.1	96.6	95.6	94.6	95.9	93.8	95.8	94.4	96.0

*Connecticut data classified by NA definition of SOC.

TABLE 8 (CONT'D)

ITEM NO.	CONN	NATL	NE	(C) MALE	(N) MALE	(C) FEM	(N) FEM	SOC 1(C)	1(N)	2(C)	2(N)	3(C)	3(N)	3*	4(C)	4(N)	4*
10A.	28.4	24.0	25.8	26.7	24.2	30.0	23.7	21.8	23.3	31.5	27.6	28.3	25.5	27.5	31.0	21.7	30.4
10B.	34.4	29.8	28.5	30.3	27.5	38.4	32.2	30.0	28.0	30.0	29.4	37.2	30.5	32.2	40.7	30.6	39.8
10(0).	49.8	55.0	55.2	52.9	56.4	46.7	53.5	55.5	56.6	50.5	53.7	48.4	54.6	51.2	45.0	55.0	46.3
10(1).	37.7	35.9	34.7	37.1	35.0	38.1	36.8	37.1	35.3	37.5	35.6	37.7	34.4	37.9	38.2	37.0	37.1
10(2).	12.6	8.9	9.8	9.9	8.4	15.1	9.5	7.3	7.9	12.0	10.7	13.9	10.8	10.9	16.8	7.7	16.5
11.	98.5	97.9	97.6	97.9	97.0	99.1	98.9	98.9	98.3	98.6	98.3	98.9	97.8	98.8	97.9	97.6	97.8
12.	64.6	59.8	65.3	66.3	59.9	63.1	59.7	52.1	58.3	67.6	66.2	65.5	65.7	61.8	71.9	53.6	71.6
13A.	93.2	85.1	87.4	92.7	83.6	93.6	86.4	85.2	86.5	94.8	88.1	96.6	84.0	92.1	95.8	83.2	95.6
13B.	96.3	95.2	95.8	95.8	95.3	96.7	95.1	92.1	93.1	96.4	96.7	97.9	96.2	95.3	98.6	94.8	98.4
13C.	96.9	95.6	96.6	96.4	94.3	97.3	96.9	92.3	95.8	97.8	97.4	99.2	94.3	96.4	98.2	95.3	97.9
13D.	91.7	83.8	86.1	92.5	83.8	91.0	83.7	81.1	83.8	96.6	87.5	93.2	84.4	90.3	94.9	81.3	95.1
13E.	77.6	71.0	73.0	77.7	71.8	77.6	70.2	61.4	66.3	80.5	76.7	84.1	69.2	75.0	84.1	71.3	83.8
13(0).	0.4	0.3	0.1	0.5	0.2	0.3	0.5	0.8	0.3	0.3	0.2	0.2	0.1	0.5	0.1	0.5	0.1
13(1).	1.0	1.3	0.6	1.3	1.7	0.7	0.8	3.1	1.0	0.2	0.6	0.1	1.1	1.1	0.5	1.8	0.5
13(2).	1.8	3.3	2.8	1.6	3.8	2.1	2.8	6.5	4.0	0.6	2.0	0.5	3.3	2.5	0.1	3.6	0.2

TABLE 8 (CONT'D)

ITEM NO.	CONN	NATL	NE	(C) MALE	(N) MALE	(C) FEM	(N) FEM	SOC 1(C)	1(N)	2(C)	2(N)	3(C)	3(N)	3*	4(C)	4(N)	4*
13(3).	4.9	10.3	9.3	4.4	9.7	5.3	11.0	11.4	11.6	2.6	6.9	3.7	11.6	5.9	2.4	10.9	2.5
13(4).	23.4	32.0	31.0	23.9	32.5	23.0	31.6	29.3	33.5	24.5	30.6	18.5	32.6	24.4	20.8	31.7	20.9
13(5).	68.5	52.7	56.1	68.4	52.1	68.7	53.3	49.0	49.5	71.8	59.8	77.0	51.0	65.5	76.1	51.4	75.8
14.	85.0	88.0	89.1	84.0	86.6	86.0	89.6	65.7	87.9	94.9	88.6	87.1	88.8	82.7	90.5	87.4	90.8
15.	35.7	25.9	35.0	30.3	22.8	40.9	29.0	31.3	29.5	39.3	27.9	32.7	25.8	34.7	38.1	22.4	38.0
16.	75.9	69.0	70.4	77.4	72.4	74.4	65.4	56.5	64.1	83.1	73.1	81.4	67.7	73.7	81.3	70.1	81.1
17.	81.1	79.1	82.9	76.8	75.6	85.2	82.5	69.2	78.6	84.8	84.6	82.3	80.3	78.7	86.9	75.8	86.7
18.	77.6	67.9	71.1	74.3	65.0	80.9	70.8	64.7	70.3	84.7	69.9	77.2	65.1	75.6	82.1	67.0	82.6
19.	58.6	56.2	61.0	57.2	55.4	59.9	57.0	65.0	52.3	56.4	58.1	60.0	59.6	60.2	54.1	55.1	54.7
20A.	44.6	26.3	28.9	43.1	28.1	46.1	24.6	32.9	26.7	45.4	33.2	43.8	24.1	40.6	54.6	23.5	54.2
20B.	95.5	94.9	95.5	94.4	93.0	96.6	96.8	90.2	95.2	97.0	96.6	97.0	94.3	94.7	97.6	94.2	97.4
20C.	73.3	60.3	68.2	72.4	59.6	74.2	61.0	68.9	61.7	78.2	63.4	74.2	60.9	73.0	73.7	57.4	74.0
20(0).	2.8	2.9	2.5	3.6	3.8	2.1	2.0	6.5	3.5	2.2	1.6	1.8	2.6	3.4	1.1	3.4	1.4
20(1).	15.6	29.8	23.0	15.1	28.9	16.0	30.7	20.0	28.5	14.6	25.1	15.7	29.9	16.9	12.6	33.1	12.3
20(2).	46.9	49.5	53.5	49.2	48.8	44.7	50.2	48.6	48.0	45.6	51.7	48.4	51.1	47.4	45.6	48.2	45.7

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TABLE 8 (CONT'D)

ITEM NO.	CONN	NATL	NE	(C) MALE	(N) MALE	(C) FEM	(N) FEM	SOC 1(C)	1(N)	2(C)	2(N)	3(C)	3(N)	3*	4(C)	4(N)	4*
20(3).	34.7	17.6	20.9	32.1	18.1	37.2	17.1	24.9	19.7	37.6	21.6	34.2	15.7	32.2	40.7	15.3	40.7
21A.	83.0	81.9	85.6	82.6	79.7	83.5	84.3	80.8	85.3	84.3	86.2	81.1	78.8	82.0	85.1	79.0	85.6
21B.	82.7	85.4	88.2	80.4	81.8	84.9	89.2	81.8	89.0	82.0	89.3	83.2	84.8	82.1	83.7	81.5	83.9
21C.	68.6	69.5	71.7	64.0	64.9	73.2	74.3	74.4	77.5	63.2	71.2	66.4	66.6	67.4	70.7	65.3	71.6
21(0).	4.9	6.6	5.4	5.4	7.9	4.5	5.2	4.0	3.8	5.3	4.2	6.2	8.9	5.1	4.5	8.4	4.6
21(1).	12.6	10.0	8.1	14.0	11.1	11.1	9.0	14.0	9.0	13.3	7.7	10.5	9.8	12.9	12.1	12.0	11.6
21(2).	20.6	19.2	21.6	23.5	21.7	17.9	16.5	13.4	13.8	23.8	23.2	25.5	19.8	21.2	20.1	19.7	19.3
21(3).	61.9	62.8	64.8	57.2	57.3	66.6	68.6	68.7	71.7	57.6	64.2	57.9	60.2	60.8	63.4	58.2	64.5

TABLE 9

COMPARISON OF CONNECTICUT AND NATIONAL ASSESSMENT P VALUES - AGE 17
(PERCENTAGE CORRECT)

ITEM NO.	CONN	NATL	NE	(C) MALE	(N) MALE	(C) FEM	(N) FEM	SOC 1(C)	1(N)	2(C)	2(N)	3(C)	3(N)	3*	4(C)	4(N)	4*
1.	75.0	77.5	78.1	71.2	72.9	78.8	82.0	59.8	73.0	82.9	85.1	72.1	75.8	73.1	79.1	76.3	79.2
2.	97.2	97.8	97.3	96.6	97.7	97.8	97.9	95.4	96.3	97.7	98.7	96.3	98.7	96.6	98.7	97.6	98.6
3A.	59.6	n.a.	n.a.	60.0	n.a.	59.2	n.a.	47.9	n.a.	63.5	n.a.	54.9	n.a.	56.4	67.3	n.a.	66.9
3B.	71.0	68.3	68.0	72.8	69.4	69.1	67.2	59.5	68.6	73.9	69.4	70.9	66.3	69.1	75.2	68.3	75.3
3C.	76.4	77.7	76.3	79.6	77.6	73.0	77.8	65.4	77.1	78.8	81.2	75.0	79.5	73.7	81.9	74.2	82.4
3(0).	7.8	n.a.	n.a.	6.6	n.a.	9.0	n.a.	16.7	n.a.	5.1	n.a.	7.6	n.a.	9.0	5.3	n.a.	5.2
3(1).	18.9	n.a.	n.a.	17.9	n.a.	20.0	n.a.	23.4	n.a.	17.2	n.a.	21.7	n.a.	20.5	15.3	n.a.	15.3
3(2).	31.8	n.a.	n.a.	32.0	n.a.	31.5	n.a.	30.4	n.a.	34.1	n.a.	33.1	n.a.	32.9	29.1	n.a.	29.3
3(3).	41.5	n.a.	n.a.	43.5	n.a.	39.4	n.a.	29.5	n.a.	43.6	n.a.	37.7	n.a.	37.6	50.3	n.a.	50.3
4.	80.5	82.6	81.4	76.9	78.1	84.2	87.2	76.7	81.1	84.6	82.3	76.9	86.5	79.3	82.3	81.8	83.4
5.	98.7	98.3	98.6	98.5	97.5	98.9	99.0	97.9	98.2	99.0	98.1	98.7	98.4	98.6	98.8	98.3	98.9
6.	78.8	74.5	78.0	73.0	69.4	84.9	79.6	69.4	75.1	84.2	78.2	74.3	73.2	76.4	83.7	72.3	84.4
7A.	89.9	84.7	86.0	88.9	82.3	90.8	87.1	85.8	83.3	91.8	88.2	89.4	86.0	89.5	90.9	82.2	90.8
7B.	90.1	84.6	86.6	87.7	80.3	92.5	88.9	81.6	84.6	93.9	86.6	89.5	88.2	88.9	92.3	81.2	92.6
7C.	82.9	76.3	79.7	78.1	70.6	87.9	82.1	73.5	79.6	86.3	77.6	82.6	80.5	81.7	85.6	71.5	85.5

*Connecticut data classified by NA definition of SOC.

TABLE 9 (CONT'D)

ITEM NO.	CONN	NATL	NE	(C) MALE	(N) MALE	(C) FEM	(N) FEM	SOC 1(C)	1(N)	2(C)	2(N)	3(C)	3(N)	3*	4(C)	4(N)	4*
7(0).	2.1	4.5	3.5	3.2	6.5	1.0	2.5	4.4	4.6	1.9	3.4	2.1	3.6	2.6	1.0	5.8	0.9
7(1).	6.5	9.1	8.4	7.7	11.2	5.3	7.0	10.9	6.8	4.9	8.9	6.7	7.1	6.8	5.4	11.5	5.9
7(2).	17.8	21.2	19.2	20.2	22.5	15.2	19.9	24.1	21.5	13.2	19.6	18.9	19.8	18.3	17.4	23.0	16.6
7(3).	73.6	64.7	68.5	68.9	59.0	78.5	70.5	60.6	65.9	80.1	68.1	72.4	69.3	72.3	76.2	59.1	76.6
8.	97.6	96.4	96.9	96.4	95.2	98.8	97.7	95.6	95.4	98.3	98.4	96.9	96.2	97.1	98.8	96.0	98.8
9A.	79.1	70.4	70.4	78.1	69.8	80.1	71.0	65.1	68.9	83.9	75.0	77.2	73.3	76.6	84.5	66.1	84.7
9B.	95.0	93.0	94.2	94.1	90.6	95.8	95.5	91.9		96.0	94.0	95.9	91.9	94.9	95.3	93.3	95.1
9(0).	3.3	5.5	4.4	3.9	7.3	2.7	3.7	7.3	5.3	2.2	4.9	2.4	6.5	3.6	2.7	5.6	2.5
9(1).	19.4	25.2	26.5	20.1	24.5	18.8	26.0	29.3	27.1	15.6	21.1	22.0	21.5	21.3	14.8	29.1	15.3
9(2).	77.3	69.1	69.0	76.1	67.9	78.6	70.3	63.4	67.1	82.2	73.9	75.6	71.9	75.1	82.5	65.3	82.3
10.	36.0	37.9	35.0	30.4	29.4	41.8	45.3	29.6	32.1	37.1	41.1	34.2	42.9	34.2	40.5	36.5	40.1
11.	40.8	40.4	43.4	39.0	40.0	42.7	40.9	38.9	42.7	47.0	43.4	36.6	39.5	39.4	43.7	37.1	44.2
12A.	37.2	26.7	27.3	35.5	26.3	38.9	27.2	39.1	22.0	36.4	27.7	37.2	27.0	37.3	36.8	28.6	36.8
12B.	61.1	67.0	65.2	61.5	64.8	60.8	69.3	51.3	66.2	66.2	69.1	55.9	67.8	58.9	67.2	65.8	66.2
12C.	75.6	67.3	69.2	71.4	64.0	80.0	70.6	67.1	66.6	80.1	72.6	72.7	68.3	73.8	79.2	63.7	79.6

TABLE 9 (CONT'D)

ITEM NO.	CONN	NATL	NE	(C) MALE	(N) MALE	(C) FEM	(N) FEM	SOC 1(C)	1(N)	2(C)	2(N)	3(C)	3(N)	3*	4(C)	4(N)	4*
12D.	69.3	63.5	65.1	65.0	60.1	73.9	66.9	63.2	61.5	72.7	66.4	64.5	65.4	67.3	74.4	61.7	74.0
12(0).	5.0	6.6	6.4	6.1	8.0	3.9	5.1	7.7	7.9	3.8	4.8	7.0	5.7	6.1	2.6	7.4	2.6
12(1).	12.9	17.4	18.1	15.0	19.6	10.8	15.1	19.2	16.6	11.8	15.5	12.8	18.1	13.9	10.4	18.7	10.6
12(2).	27.2	28.2	27.4	28.5	27.9	25.8	28.6	26.8	29.6	23.4	27.9	31.0	26.9	26.8	27.3	28.3	28.0
12(3).	43.6	39.5	38.5	40.4	36.6	47.0	42.4	37.1	39.1	47.2	41.8	41.5	40.2	42.9	46.0	37.7	45.2
12(4).	11.3	8.1	9.6	10.1	7.5	12.5	8.7	9.1	5.8	13.7	9.7	7.8	9.0	10.3	13.6	7.8	13.6
13.	93.0	93.8	93.3	91.5	91.7	94.6	95.7	89.7	93.9	93.2	95.8	92.7	93.1	92.1	95.1	92.8	95.1
14A.	62.5	51.5	55.8	58.2	49.5	66.9	53.5	52.7	52.5	66.4	56.4	58.6	49.0	59.8	68.2	48.9	68.4
14B.	62.4	51.9	52.5	52.5	44.6	72.7	59.2	56.2	54.1	64.6	55.7	56.1	50.3	59.4	70.0	48.8	69.0
14(0).	21.1	29.3	25.3	26.1	33.2	15.8	25.4	30.0	27.1	19.3	24.7	24.9	33.4	24.1	13.8	31.6	14.2
14(1).	33.0	36.8	39.9	37.0	37.5	28.8	36.0	31.1	36.1	30.5	37.5	35.4	33.6	32.5	34.2	38.2	34.1
14(2).	45.0	33.3	34.2	36.9	28.3	55.4	38.3	38.9	35.3	50.3	37.3	39.7	32.8	43.4	52.0	29.7	51.7
15A.	72.6	61.7	67.0	71.8	60.9	73.4	62.5	57.9	63.7	77.4	68.9	70.2	62.2	69.5	79.0	55.5	79.6
15B.	98.6	95.7	97.8	98.2	94.4	99.0	97.0	97.5	96.3	99.1	96.8	98.1	96.9	98.3	99.2	94.0	99.3
15C.	74.6	65.0	72.7	74.6	63.1	74.6	67.0	65.6	68.2	79.5	71.8	71.6	62.8	73.0	78.0	59.9	78.1

TABLE 9 (CONT'D)

ITEM NO.	CONN	NATL	NE	(C) MALE	(N) MALE	(C) FEM	(N) FEM	SOC 1(C)	1(N)	2(C)	2(N)	3(C)	3(N)	3*	4(C)	4(N)	4*
15(0).	0.7	2.5	1.1	0.9	3.5	0.4	1.5	1.3	2.7	0.0	2.0	1.1	2.0	0.7	0.6	2.9	0.6
15(1).	10.6	17.1	12.1	10.1	16.8	11.1	17.3	18.4	14.2	7.6	12.2	11.3	14.9	11.8	8.1	23.1	7.9
15(2).	31.0	35.7	35.0	32.5	37.0	29.4	34.4	38.3	35.0	28.7	31.5	34.3	42.3	33.4	25.7	35.7	25.5
15(3).	57.7	44.6	51.8	56.5	42.5	59.0	46.8	42.0	48.0	63.6	54.1	53.4	40.8	54.1	65.6	38.3	66.0
16A.	70.3	n.a.	n.a.	68.7	n.a.	72.0	n.a.	71.9	n.a.	69.6	n.a.	69.1	n.a.	69.7	71.3	n.a.	71.7
16B.	78.7	n.a.	n.a.	76.3	n.a.	81.2	n.a.	75.9	n.a.	79.7	n.a.	77.9	n.a.	77.9	80.2	n.a.	80.7
16C.	82.1	74.4	77.2	80.9	70.7	83.4	78.2	80.3	70.5	85.8	80.0	78.3	75.3	81.2	83.4	72.1	84.3
16(0).	5.5	n.a.	n.a.	6.2	n.a.	4.8	n.a.	6.1	n.a.	5.6	n.a.	5.6	n.a.	5.7	4.9	n.a.	5.0
16(1).	13.8	n.a.	n.a.	14.8	n.a.	12.7	n.a.	14.7	n.a.	11.9	n.a.	15.1	n.a.	14.1	13.8	n.a.	13.0
16(2).	24.8	n.a.	n.a.	26.0	n.a.	23.4	n.a.	24.2	n.a.	24.3	n.a.	27.6	n.a.	25.8	22.8	n.a.	22.3
16(3).	56.0	n.a.	n.a.	53.0	n.a.	59.1	n.a.	55.0	n.a.	58.2	n.a.	51.7	n.a.	54.3	58.5	n.a.	59.7
17A.	90.5	84.8	88.8	88.2	83.0	92.8	86.6	87.4	85.5	92.0	86.9	89.3	83.3	89.6	92.1	83.7	92.5
17B.	94.8	89.8	92.6	92.4	87.0	97.3	92.5	91.5	89.9	96.8	91.1	93.7	89.1	94.2	96.0	89.1	96.1
17(0).	2.0	3.0	1.8	2.8	4.0	1.2	2.0	2.9	3.7	1.3	1.9	2.8	3.9	2.4	1.3	3.0	1.2
17(1).	10.7	18.5	13.2	13.8	20.5	7.5	16.5	15.4	17.3	8.6	18.3	11.4	18.3	11.5	9.3	19.4	8.9

TABLE 9 (CONT'D)

ITEM NO.	CONN	NATL	NE	(C) MALE	(N) MALE	(C) FEM	(N) FEM	SOC 1(C)	1(N)	2(C)	2(N)	3(C)	3(N)	3*	4(C)	4(N)	4*
17(2).	87.3	78.0	84.1	83.4	74.8	91.3	81.3	81.8	79.0	90.1	79.9	85.7	77.1	86.1	89.4	76.7	89.9
18.	78.4	73.7	75.9	79.8	75.9	76.9	71.3	65.5	71.4	81.7	80.7	78.7	72.5	76.4	82.6	70.6	82.9
19.	73.0	63.9	67.5	70.0	63.9	76.3	63.9	59.6	63.8	78.7	70.6	71.3	62.9	71.2	77.3	59.9	77.3
20.	76.7	75.8	76.4	73.9	73.0	79.7	78.7	73.6	73.3	78.2	75.5	74.8	76.6	75.8	79.1	77.1	78.8
21A.	92.0	92.5	94.2	89.9	88.9	94.3	95.6	86.3	95.2	94.8	92.2	91.3	94.8	91.4	93.5	89.9	93.6
21B.	84.0	88.5	90.9	80.1	84.4	88.2	92.1	76.5	89.8	88.1	88.7	84.5	92.1	83.8	84.2	85.7	84.7
[illegible]0).	2.0	3.0	1.2	2.6	5.2	1.4	1.1	4.5	1.6	0.8	4.0	1.8	.15	2.1	1.9	4.0	1.8
21(1).	15.4	12.1	11.7	18.6	15.0	12.0	9.5	19.6	11.4	120.	11.1	15.9	9.2	15.5	15.5	14.7	15.2
21(2).	82.6	84.4	86.7	78.8	79.1	86.6	89.1	75.9	86.8	87.1	84.9	82.3	88.9	82.4	82.6	80.5	83.1

TABLE 10

CONNECTICUT AND NATIONAL ASSESSMENT STANDARD ERRORS - AGE 9

ITEM NO.	CONN	NATL	NE	(C) MALE	(N) MALE	(C) FEM	(N) FEM	SOC 1(C)	1(N)	2(C)	2(N)	3(C)	3(N)	3*	4(C)	4(N)	4*
1.	1.6	1.3	2.0	1.8	1.4	1.8	2.0	2.1	2.5	2.8	2.1	2.7	3.6	1.9	2.6	1.4	2.5
2.	1.7	1.1	1.8	2.2	1.4	1.8	1.5	4.6	3.2	2.5	1.2	2.3	1.8	2.2	2.2	1.6	2.1
3.	1.5	1.1	1.7	1.9	1.7	1.7	1.3	3.2	2.1	2.5	2.4	1.7	1.7	1.8	2.2	1.9	2.1
4.	1.5	1.1	1.2	1.8	1.3	1.6	1.5	3.7	2.0	1.6	1.8	1.7	2.5	1.9	1.3	2.3	1.3
5.	1.9	1.0	1.6	2.4	1.3	1.7	1.4	5.0	2.5	1.3	1.7	1.7	2.9	2.5	1.4	1.8	1.3
6.	1.3	1.1	2.1	1.8	1.4	1.3	1.5	3.5	2.3	1.1	2.6	1.8	2.2	1.7	1.1	2.1	1.0
7.	1.3	1.0	1.9	1.7	1.4	1.1	1.3	3.4	2.2	1.0	1.4	1.3	2.4	1.6	0.7	1.7	0.7
8.	2.0	1.2	2.4	2.1	1.7	2.4	1.5	4.4	2.9	1.9	2.6	2.6	2.4	2.6	1.9	2.3	1.8
9.	1.8	1.0	1.7	2.1	1.5	1.9	1.3	4.6	2.3	1.8	2.9	1.8	2.5	2.3	1.8	1.6	1.8
10.	1.1	0.9	1.6	1.6	1.6	1.2	1.3	2.7	1.9	2.2	2.4	2.2	2.2	1.3	1.8	1.4	1.7
11.	1.7	1.3	1.1	2.0	1.9	1.8	1.5	3.8	2.9	2.7	2.0	1.8	2.3	2.1	2.0	2.6	1.9
12.	0.4	0.4	0.7	0.6	0.5	0.4	0.6	1.5	0.8	0.3	0.9	0.5	0.9	0.6	0.3	0.9	0.3
13.	2.2	1.6	2.6	2.4	1.9	2.4	2.2	4.1	3.1	2.5	3.7	3.5	3.8	2.7	2.7	2.2	2.6
14.	0.8	0.8	1.2	1.1	1.1	1.0	1.0	2.3	1.4	0.8	1.1	1.0	2.1	1.0	1.0	1.4	1.0
15.	2.5	1.5	2.7	2.4	2.0	2.9	1.6	4.6	2.8	3.6	3.3	4.3	3.4	3.2	3.0	2.6	2.8

*Connecticut data classified by NA definition of SOC.

TABLE 10 (CONT'D)

ITEM NO.	CONN	NATL	NE	(C) MALE	(N) MALE	(C) FEM	(N) FEM	SOC 1(C)	1(N)	2(C)	2(N)	3(C)	3(N)	3*	4(C)	4(N)	4*
16.	0.8	0.6	0.7	1.2	0.8	0.7	0.8	2.7	1.3	0.9	1.5	1.0	1.0	1.0	1.2	1.2	1.2
17.	1.3	0.8	1.3	1.6	1.0	1.2	1.0	4.4	1.5	0.7	1.5	0.9	1.9	1.7	1.1	1.6	1.0
18A.	2.2	1.4	2.2	2.2	1.7	2.6	1.8	3.6	3.1	3.2	3.5	4.4	2.7	2.7	2.7	2.0	2.6
18B.	1.8	1.3	2.6	2.0	1.5	2.0	1.7	2.8	2.5	3.1	3.0	2.9	2.6	2.2	2.5	2.1	2.4
18(0).	2.3	n.a.	n.a.	2.5	n.a.	2.6	n.a.	4.5	n.a.	3.7	n.a.	4.0	n.a.	2.9	2.9	n.a.	2.9
18(1).	1.4	n.a.	n.a.	1.7	n.a.	1.8	n.a.	3.1	n.a.	2.7	n.a.	2.9	n.a.	1.8	2.0	n.a.	2.0
18(2).	1.5	1.0	1.6	1.6	1.0	1.9	1.4	2.1	1.9	2.7	2.4	2.4	1.7	1.9	2.2	1.5	2.1
19.	1.9	1.1	1.8	2.3	1.4	1.9	1.5	4.2	2.5	1.5	2.4	2.7	3.4	2.4	2.0	2.1	1.9
20.	1.3	1.1	2.3	1.6	1.5	1.6	1.6	2.8	2.9	3.4	2.5	21.	1.7	1.6	1.8	1.9	1.7
21.	2.2	1.3	2.0	2.5	1.7	2.3	1.6	3.6	3.8	3.5	2.5	3.7	3.5	2.6	3.4	2.1	3.4

TABLE 11

CONNECTICUT AND NATIONAL ASSESSMENT STANDARD ERRORS - AGE 13

ITEM NO.	CONN	NATL	NE	(C) MALE	(N) MALE	(C) FEM	(N) FEM	SOC 1(C)	1(N)	2(C)	2(N)	3(C)	3(N)	3*	4(C)	4(N)	4*
1.	1.1	1.1	2.3	1.6	1.5	1.5	1.3	2.7	2.2	2.8	1.9	1.9	2.2	1.5	1.7	1.3	1.6
2.	0.6	0.1	0.2	0.9	0.2	0.6	0.1	2.4	0.3	0.6	0.2	0.6	0.0	0.8	0.5	0.2	0.5
3.	1.1	1.24	2.11	1.6	1.6	1.6	1.6	2.5	2.7	2.6	2.4	2.2	4.0	1.4	1.8	2.0	1.8
4.	1.2	0.9	1.3	1.4	1.3	1.4	1.0	4.6	1.8	1.5	2.1	1.8	2.0	1.7	0.9	1.1	0.9
5.	1.4	1.2	2.6	1.9	1.6	1.8	1.7	3.7	2.6	2.9	1.5	2.6	3.2	2.0	1.7	1.9	2.0
6.	1.2	1.0	1.3	1.6	1.7	1.5	1.0	3.9	2.1	21.	1.7	2.0	2.1	1.6	1.8	1.7	1.7
7.	1.2	1.0	1.6	1.5	1.3	1.4	1.2	3.4	4.0	1.2	1.8	2.1	1.7	1.0	1.6	1.3	1.0
8A.	2.6	1.1	2.1	2.9	1.4	2.6	1.3	8.9	3.1	2.0	3.5	3.6	2.2	3.4	3.7	1.3	3.5
8B.	2.1	1.0	1.3	2.2	1.6	2.2	1.2	7.3	1.8	1.4	1.7	2.1	3.3	2.8	1.3	1.6	1.2
8C.	2.3	1.1	1.9	2.6	1.4	2.4	1.5	7.1	2.3	2.8	2.3	3.7	1.8	3.0	2.3	2.1	2.2
8(0).	1.3	0.6	1.1	1.8	1.0	1.1	0.8	4.6	1.7	0.7	1.3	1.4	1.4	1.8	1.0	0.9	1.0
8(1).	1.2	0.9	0.9	1.3	1.5	1.6	1.0	3.8	1.7	1.6	1.7	1.8	3.1	1.6	1.6	1.2	1.5
8(2).	1.2	1.2	3.8	1.6	1.5	1.6	1.7	4.2	2.0	2.1	4.0	2.0	1.7	1.6	2.0	1.6	1.9
8(3).	2.7	1.2	3.6	2.9	1.6	2.9	1.8	8.0	2.7	3.0	4.3	3.6	2.6	3.5	3.4	1.9	3.2
9.	0.8	0.6	1.0	1.0	0.8	1.0	0.7	3.1	1.6	0.6	1.1	1.0	0.8	1.1	0.7	1.0	0.7

*Connecticut data classified by NA definition of SOC.

TABLE 11 (CONT'D)

ITEM NO.	CONN	NATL	NE	(C) MALE	(N) MALE	(C) FEM	(N) FEM	SOC 1(C)	1(N)	2(C)	2(N)	3(C)	3(N)	3*	4(C)	4(N)	4*
10A.	1.6	1.1	2.1	2.0	1.2	2.0	1.6	4.1	2.5	3.3	2.7	2.6	2.7	2.1	2.2	1.7	2.1
10B.	1.5	1.1	2.3	1.7	1.5	2.0	1.4	3.8	2.5	3.4	1.4	2.8	2.0	1.9	2.2	1.9	2.2
10(0).	1.6	1.1	2.3	1.9	1.5	2.1	1.6	4.4	2.3	3.9	2.4	2.7	2.4	2.2	1.9	1.8	2.1
10(1).	1.2	1.1	2.7	1.7	1.5	1.7	1.4	3.1	2.1	3.1	2.6	2.2	2.3	1.6	1.5	1.6	1.7
10(2).	1.2	0.7	1.4	1.2	0.9	1.7	0.9	3.2	1.2	2.2	1.7	2.2	1.3	1.5	1.9	1.1	1.8
11.	0.3	0.3	0.7	0.4	0.5	0.3	0.4	0.8	0.8	0.4	0.5	0.5	0.7	0.6	0.3	0.4	0.6
12.	2.2	2.0	5.8	2.2	2.6	2.7	2.1	7.3	6.0	3.3	3.1	3.3	3.6	3.0	2.2	2.7	2.1
13A.	1.0	1.0	2.0	1.1	1.3	1.1	1.2	3.9	2.0	1.1	1.4	0.8	2.0	1.4	0.7	1.8	0.7
13B.	0.7	0.6	1.0	0.9	0.8	0.7	0.8	2.7	1.6	0.8	1.0	0.9	1.4	0.9	0.4	1.1	0.4
13C.	0.6	0.6	0.9	0.8	1.1	0.6	0.6	2.3	1.3	0.6	0.7	0.4	2.2	0.8	0.5	0.9	0.5
13D.	1.2	1.2	1.7	1.4	1.3	1.3	1.6	4.5	2.1	0.8	2.1	1.3	2.9	1.6	0.9	1.8	0.8
13E.	2.1	1.1	2.0	2.2	1.5	2.3	1.6	5.9	3.3	2.4	1.7	3.1	2.9	2.8	1.6	1.9	1.6
13(0).	0.1	0.1	0.1	0.2	0.1	0.2	0.2	0.5	0.3	0.3	0.2	0.2	0.1	0.2	0.2	0.3	0.2
13(1).	0.3	0.3	0.3	0.4	0.4	0.3	0.4	1.4	0.4	0.2	0.4	0.2	0.8	0.4	0.2	0.6	0.2
13(2).	0.5	0.4	0.8	0.6	0.7	0.6	0.4	2.3	0.8	0.3	0.7	0.3	1.0	0.7	0.1	0.7	0.2

TABLE 11 (CONT'D)

ITEM NO.	CONN	NATL	NE	(C) MALE	(N) MALE	(C) FEM	(N) FEM	SOC 1(C)	1(N)	2(C)	2(N)	3(C)	3(N)	3*	4(C)	4(N)	4*
13(3).	0.8	0.8	1.4	0.9	0.8	0.9	1.2	2.7	2.3	0.7	1.2	1.0	2.0	1.1	0.5	1.0	0.5
13(4).	1.5	0.9	1.6	1.7	1.3	1.9	1.2	4.2	2.1	2.8	2.3	2.5	1.3	2.0	1.9	1.6	1.8
13(5).	2.5	1.4	2.4	2.6	1.9	2.7	1.8	7.0	4.0	3.1	2.5	3.3	3.6	3.3	2.0	2.1	1.9
14.	2.6	.9	1.4	2.7	1.3	2.6	1.0	10.0	1.7	0.9	1.7	3.7	1.7	3.3	4.2	1.8	3.8
15.	1.6	1.1	2.6	1.7	1.5	2.1	1.8	3.7	2.8	3.2	2.5	2.8	2.4	2.0	2.2	1.7	2.1
16.	2.1	1.4	2.4	2.1	1.6	2.3	1.9	6.9	2.7	2.3	1.9	2.8	3.2	2.8	1.6	2.7	1.5
17.	1.6	1.7	1.8	2.1	21.	1.6	1.7	5.6	2.3	2.0	1.8	2.5	2.2	2.1	1.7	4.0	1.6
18.	1.8	1.8	3.6	2.0	1.7	2.2	2.5	4.6	4.0	2.3	3.9	2.7	3.5	2.4	1.9	3.0	1.8
19.	1.5	1.4	3.5	2.1	2.0	1.7	1.5	4.2	3.2	2.6	3.6	3.1	2.6	1.9	2.3	1.7	2.2
20A.	2.3	1.5	2.6	2.4	1.7	2.6	1.8	5.2	3.6	5.8	3.6	2.8	2.2	3.1	2.5	2.0	2.4
20B.	0.8	0.7	1.3	0.9	1.2	0.8	0.5	2.9	1.6	0.8	0.9	1.0	2.2	1.0	0.5	1.0	0.6
20C.	1.5	1.2	1.9	1.6	1.6	1.9	1.5	4.4	2.5	2.8	2.5	2.8	3.1	2.0	1.8	2.2	1.7
20(0).	0.6	0.4	0.8	0.8	0.6	0.5	0.4	2.2	1.1	0.6	0.6	0.8	0.8	0.8	0.4	0.9	0.4
20(1).	1.1	1.0	1.5	1.2	1.2	1.4	1.5	2.7	2.1	2.1	2.3	2.2	2.3	1.4	1.3	1.8	1.3
20(2).	1.7	1.4	1.6	2.0	1.5	2.0	2.1	4.2	2.8	4.0	2.6	2.7	3.1	2.2	2.3	1.9	2.2

TABLE 11 (CONT'D)

ITEM NO.	CONN	NATL	NE	(C) MALE	(N) MALE	(C) FEM	(N) FEM	SOC 1(C)	1(N)	2(C)	2(N)	3(C)	3(N)	3*	4(C)	4(N)	4*
20(3).	2.3	1.2	2.4	2.4	1.3	2.7	1.6	6.1	3.4	5.6	2.9	2.4	2.0	31.	2.6	1.4	2.4
21A.	1.3	1.0	1.8	1.6	1.7	1.5	1.2	2.6	1.9	1.7	1.6	3.8	2.7	1.7	1.8	2.0	1.7
21B.	1.2	1.2	2.1	1.5	1.7	1.3	1.1	2.6	1.9	1.8	1.6	3.1	2.6	1.5	1.8	2.5	1.7
21C.	1.8	1.4	2.9	2.1	1.9	1.9	1.5	3.3	2.2	3.2	2.6	4.5	3.9	2.2	2.9	2.6	2.8
21(0).	0.9	0.6	1.0	1.2	1.0	1.0	0.8	2.5	0.8	1.2	1.1	2.3	1.8	1.2	0.9	1.2	0.9
21(1).	0.9	0.8	1.7	1.3	1.1	1.0	1.0	2.0	1.3	1.8	1.1	2.1	2.2	1.2	1.6	1.7	1.5
21(2).	1.3	1.1	2.2	1.7	1.5	1.6	1.1	2.8	1.7	2.2	2.4	3.0	2.1	1.7	1.8	2.0	1.8
21(3).	2.0	1.6	3.2	2.2	2.2	2.3	1.6	3.6	2.6	3.3	2.9	5.2	4.3	2.5	3.3	3.1	3.2

TABLE 12

CONNECTICUT AND NATIONAL ASSESSMENT STANDARD ERRORS - AGE 17

ITEM NO.	CONN	NATL	NE	(C) MALE	(N) MALE	(C) FEM	(N) FEM	SOC 1(C)	1(N)	2(C)	2(N)	3(C)	3(N)	3*	4(C)	4(N)	4*
1.	1.4	1.1	1.7	1.7	1.6	1.7	1.1	4.9	2.8	1.8	1.3	2.2	2.6	1.9	1.3	2.1	1.2
2.	0.5	0.3	0.8	0.6	0.5	0.6	0.5	1.8	1.1	0.7	0.4	0.9	0.4	0.6	0.3	0.5	0.3
3A.	1.4	n.a.	n.a.	1.6	n.a.	1.9	n.a.	3.9	n.a.	2.1	n.a.	2.2	n.a.	1.7	1.5	n.a.	1.5
3B.	1.2	1.5	3.4	1.5	2.1	1.8	1.6	4.0	3.0	2.1	3.9	1.9	2.4	1.6	1.4	2.2	1.4
3C.	1.2	1.1	2.3	1.4	1.7	1.7	1.3	3.8	3.7	2.1	1.8	1.9	2.1	1.6	1.2	2.0	1.2
3(0).	0.8	n.a.	n.a.	0.9	n.a.	1.2	n.a.	3.5	n.a.	0.9	n.a.	1.1	n.a.	1.1	0.7	n.a.	0.7
3(1).	0.9	n.a.	n.a.	1.2	n.a.	1.4	n.a.	2.2	n.a.	1.8	n.a.	1.7	n.a.	1.1	1.2	n.a.	1.1
3(2).	1.0	n.a.	n.a.	1.5	n.a.	1.7	n.a.	2.6	n.a.	2.1	n.a.	2.0	n.a.	1.3	1.5	n.a.	1.5
3(3).	1.4	n.a.	n.a.	1.7	n.a.	1.9	n.a.	3.8	n.a.	2.5	n.a.	2.2	n.a.	1.7	1.6	n.a.	1.6
4.	1.0	0.9	2.0	1.3	1.2	1.4	1.1	2.7	2.4	1.6	1.7	1.8	1.9	1.2	1.3	1.3	1.2
5.	0.2	0.3	0.4	0.3	0.5	0.3	0.4	0.8	0.5	0.4	0.6	0.4	0.7	0.3	0.3	0.6	0.3
6.	1.3	1.2	2.5	1.6	1.3	1.8	1.5	4.9	2.6	2.0	3.0	2.0	2.4	1.8	1.2	1.8	1.1
7A.	0.8	0.8	1.5	1.0	1.1	1.3	0.9	2.8	2.1	1.2	1.4	1.3	1.9	1.0	1.0	1.4	0.9
7B.	0.9	0.8	1.9	1.1	1.3	1.5	0.8	4.0	2.1	1.1	1.6	1.3	1.4	1.3	0.8	1.4	0.8
7C.	1.2	1.0	2.0	1.5	1.4	1.6	1.1	4.9	2.2	1.6	2.0	1.9	2.9	1.6	1.1	1.5	1.1

*Connecticut data classified by NA definition of SOC.

TABLE 12 (CONT'D)

ITEM NO.	CONN	NATL	NE	(C) MALE	(N) MALE	(C) FEM	(N) FEM	SOC 1(C)	1(N)	2(C)	2(N)	3(C)	3(N)	3*	4(C)	4(N)	4*
7(0).	0.4	0.4	0.7	0.6	0.6	0.5	0.4	1.9	1.0	0.6	0.7	0.5	0.6	0.5	0.3	0.8	0.3
7(1).	0.7	0.6	1.3	0.9	0.9	1.2	0.7	2.8	1.0	1.0	1.5	1.1	1.4	0.9	0.7	1.0	0.7
7(2).	1.0	0.8	2.2	1.3	1.1	1.4	1.1	2.7	2.9	1.7	1.6	1.9	1.7	1.3	1.3	1.4	1.2
7(3).	1.4	1.2	3.0	1.7	1.6	2.0	1.2	5.4	3.4	1.9	2.3	2.2	3.0	1.9	1.4	1.5	1.3
8.	0.4	0.4	0.8	0.7	0.6	0.5	0.5	1.8	1.0	0.6	0.8	0.7	0.7	0.6	0.3	0.5	0.3
9A.	1.3	1.3	3.0	1.5	1.6	1.9	1.5	4.1	2.4	1.7	2.7	1.9	3.6	1.7	1.2	1.7	1.1
9B.	0.6	0.6	1.0	0.7	0.9	1.0	0.7	2.2	1.3	0.9	1.2	0.8	1.8	0.8	0.6	0.9	0.6
9(0).	0.6	0.6	1.0	0.6	0.8	0.8	0.6	2.3	1.0	0.7	1.0	0.6	1.9	0.7	0.4	0.8	0.4
9(1).	1.1	1.0	2.2	1.4	1.3	1.7	1.4	3.2	2.0	1.6	2.1	2.1	2.1	1.4	1.2	1.4	1.2
9(2).	1.3	1.2	2.8	1.5	1.5	1.9	1.6	4.0	2.2	1.7	2.8	2.0	3.5	1.7	1.2	1.7	1.2
10.	1.2	1.2	2.4	1.5	1.7	2.2	1.5	3.5	2.9	2.3	1.8	1.9	2.5	1.5	1.6	2.1	1.6
11.	1.3	1.2	2.2	1.6	1.5	2.3	1.5	3.2	3.0	2.4	2.4	2.2	2.7	1.6	1.6	2.1	1.6
12A.	1.2	1.2	2.6	1.6	1.6	2.2	1.7	3.0	2.5	2.4	2.7	2.3	3.0	1.5	1.6	1.4	1.5
12B.	1.4	1.2	2.7	1.7	1.8	2.4	1.6	3.2	3.3	2.4	2.0	2.4	2.0	1.7	1.5	1.7	1.5
12C.	1.3	1.4	3.7	1.7	2.0	2.2	1.9	5.0	4.5	1.9	2.2	2.1	3.9	1.7	1.3	1.9	1.22

TABLE 12 (CONT'D)

ITEM NO.	CONN	NATL	NE	(C) MALE	(N) MALE	(C) FEM	(N) FEM	SOC 1(C)	1(N)	2(C)	2(N)	3(C)	3(N)	3*	4(C)	4(N)	4*
12D.	1.2	1.4	3.8	1.7	1.8	2.0	1.7	3.2	4.6	2.0	2.1	2.6	2.6	1.6	1.4	1.8	1.4
12(0).	0.6	0.8	2.2	0.9	1.1	0.9	0.8	2.3	2.6	0.9	1.0	1.4	1.3	0.9	1.5	1.2	0.5
12(1).	0.9	1.0	2.1	1.1	1.2	1.5	1.5	2.7	2.5	1.5	1.8	1.6	2.6	1.1	1.0	1.7	1.0
12(2).	1.1	1.0	1.5	1.5	1.6	1.8	1.4	2.6	1.8	2.1	2.4	1.9	2.4	1.3	1.5	1.6	1.5
12(3).	1.2	1.3	3.4	1.7	1.5	2.2	2.0	3.3	4.5	2.2	2.5	2.3	3.2	1.5	1.7	1.9	1.6
12(4).	0.8	0.7	1.5	1.0	0.8	1.5	1.3	1.8	2.0	2.0	1.3	1.2	1.5	1.1	1.2	1.2	1.1
13.	0.6	0.5	1.3	0.9	0.9	1.2	0.5	2.3	1.0	1.1	1.0	1.1	1.2	0.8	0.7	0.9	0.7
14A.	1.3	1.5	2.3	1.6	1.7	2.3	1.9	3.7	3.1	2.2	2.9	2.3	3.8	1.6	1.5	1.9	1.5
14B.	1.3	1.3	2.4	1.7	1.8	2.3	1.9	3.8	3.0	2.2	2.6	2.6	3.2	1.7	1.5	1.7	1.4
14(0).	1.1	1.3	2.2	1.4	1.7	1.9	1.6	3.3	3.0	1.8	2.4	2.0	3.4	1.4	1.1	1.6	1.1
14(1).	1.1	1.1	2.4	1.5	1.4	2.0	1.5	2.7	3.1	2.2	1.7	2.0	2.1	1.4	1.6	2.0	1.5
14(2).	1.4	1.3	1.9	1.7	1.7	2.5	1.8	4.1	3.1	2.3	2.1	2.7	3.2	1.8	1.6	2.0	1.6
15A.	1.4	1.5	3.1	1.7	1.9	2.7	2.0	4.4	3.3	2.3	3.0	2.3	3.2	1.9	1.3	2.1	1.2
15B.	0.3	0.4	0.7	0.4	0.7	0.4	0.5	1.1	1.0	0.4	1.3	0.5	0.7	0.4	0.4	0.6	0.3
15C.	1.2	1.2	2.4	1.4	1.7	2.8	1.8	3.5	2.7	2.0	2.6	2.0	2.8	1.5	1.3	1.8	1.3

TABLE 12 (CONT'D)

ITEM NO.	CONN	NATL	NE	(C) MALE	(N) MALE	(C) FEM	(N) FEM	SOC 1(C)	1(N)	2(C)	2(N)	3(C)	3(N)	3*	4(C)	4(N)	4*
15(0).	0.2	0.3	0.6	0.3	0.6	0.3	0.4	0.8	0.8	0.0	0.8	0.4	0.5	0.2	0.3	0.5	0.3
15(1).	0.8	0.9	1.9	1.0	1.2	1.8	1.2	3.0	1.8	1.2	1.8	1.3	2.1	1.1	0.9	1.3	0.8
15(2).	1.3	1.1	2.4	1.6	1.3	2.6	1.5	3.1	2.0	2.6	2.4	2.3	2.9	1.7	1.4	1.2	1.4
15(3).	1.6	1.5	3.3	1.8	1.8	3.1	2.1	4.2	3.3	2.9	3.1	2.5	3.6	2.1	1.5	1.6	1.5
16A.	1.1	n.a.	n.a.	1.4	n.a.	2.6	n.a.	2.8	n.a.	2.2	n.a.	2.1	n.a.	1.4	1.5	n.a.	1.4
16B.	0.9	n.a.	n.a.	1.4	n.a.	2.2	n.a.	3.0	n.a.	1.8	n.a.	1.7	n.a.	1.2	1.3	n.a.	1.2
16C.	1.0	1.0	2.4	1.3	1.5	2.2	1.3	2.8	2.7	1.5	1.8	1.9	2.2	1.2	1.2	1.5	1.1
16(0).	0.5	n.a.	n.a.	0.8	n.a.	1.3	n.a.	1.6	n.a.	1.1	n.a.	1.1	n.a.	0.7	0.8	n.a.	0.7
16(1).	0.8	n.a.	n.a.	1.1	n.a.	1.6	n.a.	1.9	n.a.	1.5	n.a.	1.4	n.a.	1.0	1.1	n.a.	1.0
16(2).	1.0	n.a.	n.a.	1.3	n.a.	2.1	n.a.	2.8	n.a.	2.0	n.a.	1.9	n.a.	1.3	1.4	n.a.	1.3
16(3).	1.2	n.a.	n.a.	1.5	n.a.	2.7	n.a.	3.7	n.a.	2.2	n.a.	2.2	n.a.	1.5	1.6	n.a.	1.6
17A.	0.7	0.9	1.4	1.0	1.0	1.8	1.3	2.1	2.3	1.2	1.4	1.3	1.4	0.9	0.9	1.3	0.8
17B.	0.6	0.6	0.9	0.9	1.0	1.2	0.7	2.6	1.2	0.8	1.5	1.0	0.9	0.8	0.6	1.2	0.5
17(0).	0.3	0.3	0.5	0.5	0.5	0.7	0.3	1.1	0.7	0.5	0.6	0.6	0.8	0.4	0.4	0.5	0.3
17(1).	0.8	0.9	1.3	1.1	1.1	1.8	1.2	2.6	2.1	1.2	1.7	1.5	1.8	1.0	0.9	1.4	0.9

TABLE 12 (CONT'D)

ITEM NO.	CONN	NATL	NE	(C) MALE	(N) MALE	(C) FEM	(N) FEM	SOC 1(C)	1(N)	2(C)	2(N)	3(C)	3(N)	3*	4(C)	4(N)	4*
17(2).	0.9	0.9	1.6	1.2	1.1	2.2	1.3	3.2	2.4	1.3	1.8	1.6	1.7	1.1	1.0	1.5	0.9
18.	1.2	1.1	2.6	1.3	1.2	3.8	1.7	4.2	3.4	1.9	1.5	1.7	1.9	1.6	1.2	2.2	1.2
19.	1.3	1.2	1.8	1.7	1.7	3.5	1.8	4.1	3.4	1.9	2.4	2.3	3.0	1.7	1.4	1.8	1.3
20.	1.0	0.9	1.9	1.4	1.3	2.2	1.0	2.6	2.7	1.9	1.8	1.9	1.7	1.2	1.3	1.4	1.3
21A.	0.7	0.5	1.1	1.0	0.9	2.3	0.6	2.9	1.3	1.0	1.3	1.1	0.9	1.0	0.8	1.0	0.8
21B.	1.0	0.7	1.4	1.3	1.1	3.7	0.8	3.6	1.6	1.6	1.3	1.7	1.3	1.3	1.2	1.0	1.1
21(0).	0.6	0.4	0.4	0.8	0.6	1.5	1.3	2.6	0.6	0.7	0.8	0.7	0.5	0.8	0.6	0.6	0.6
21(1).	0.9	0.7	1.5	1.3	1.0	2.2	0.7	2.8	1.6	1.5	1.7	1.7	1.1	1.2	1.1	1.1	1.1
21(2).	1.1	0.7	1.4	1.4	1.2	3.1	0.9	3.9	1.5	1.7	1.8	1.8	1.3	1.5	1.2	1.4	1.2

TABLE 13

COMPARISON OF CONNECTICUT AND NATIONAL RESULTS

(SIGNIFICANCE OF DIFFERENCES)

AGE

9		13		17	
ITEM NO.	SIG*	ITEM NO.	SIG*	ITEM NO.	SIG*
1		1	-	1	-
2	-	2	+	2	-
3		3		3B	+
4	+	4		3C	
5		5	+	4	-
6	+	6	+	5	+
7	+	7	+++	6	++
8	+++	8A	--	7A	+++
9	+	8B		7B	+++
10	--	8C		7C	+++
11	+++	9		8	++
12	+	10A	++	9A	+++
13	++	10B	++	9B	++
14	+++	11	+	10	-
15	++	12	+	11	
16	++	13A	+++	12A	+++
17	++	13B	+	12B	---
18A	++	13C	+	12C	+++
18B	+++	13D	+++	12D	+++
19	++	13E	++	13	-
20	-	14	-	14A	+++
21	+	15	+++	14B	+++
		16	++	15A	+++
		17		15B	+++
18(2)	+++	18	+++	15C	+++

TABLE 13 (CONT'D)

AGE 9		AGE 13		AGE 17	
ITEM NO.	SIG*	ITEM NO.	SIG*	ITEM NO.	SIG*
		19	+	16C	+++
		20A	+++	17A	+++
		20B		17B	+++
		20C	+++	18	++
		21A		19	+++
		21B	-	20	
		21C		21A	
				21B	---
		8(0)	+	7(0)	---
		8(1)		7(1)	--
		8(2)		7(2)	--
		8(3)		7(3)	+++
		10(0)	--	9(0)	--
		10(1)	+	9(1)	---
		10(2)	++	9(2)	+++
		13(0)		12(0)	-
		13(1)		12(1)	---
		13(2)	--	12(2)	
		13(3)	---	12(3)	++
		13(4)	---	12(4)	+++
		13(5)	+++	14(0)	---
		20(0)		14(1)	--
		20(1)	---	14(2)	+++
		20(2)	-	15(0)	---
		20(3)	+++	15(1)	---
		21(0)	-	15(2)	--
		21(1)	++	15(3)	+++
		21(2)		17(0)	--

TABLE 13 (CONT'D)

AGE					
9		13		17	
ITEM NO.	SIG*	ITEM NO.	SIG*	ITEM NO.	SIG*
		21(3)		17(1)	---
				17(2)	+++
				21(0)	-
				21(1)	++
				21(2)	-

*The statistical significance is shown by the number of symbols in in the table cell. A blank indicates the relative standard error was less than one. One symbol indicates the relative standard error was between one and two; two symbols indicate a relative standard error between two and three; and three symbols indicate a relative standard error of three or more. The plus sign indicates Connecticut scores are higher than National; minus indicates Connecticut is lower. The probability that the "population" differences are in the direction indicated are, for one symbol -- between 0.8389 and 0.9772; for two symbols -- between 0.9772 and 0.9987; and for three symbols, the probability is higher than 0.9987.

TABLE 14

READING OBJECTIVES VS. ASSESSMENT EXERCISES

ITEM NO.	OBJECTIVE BY AGE GROUP 9	13	17
1	1.2	1.1	1.3
2	1.2	1.2	1.1
3A	1.2	1.2	1.5
3B			1.5
3C			1.5
4	1.1	1.5	1.1
5	1.1	1.2	1.5
6	1.1	1.5	1.1
7A	1.1	1.5	1.2
7B			1.2
7C			1.2
8A	1.2	1.2	1.2
8B		1.2	
8C		1.2	
9A	1.2	1.1	1.2
9B			1.2
10A	1.2	1.1, 1.2	1.1
10B		1.1, 1.2	
11	1.5	1.1	1.2
12A	1.1	1.1, 1.2	1.2
12B			1.2
12C			1.1
12D			1.2
13A	1.5	1.5	1.5
13B		1.5	
13C		1.5	
13D		1.5	
13E		1.5	
14A	1.1	1.1, 1.2	1.1
14B			1.1
15A	1.5	1.5	1.5
15B			1.5
15C			1.2
16A	1.1	1.2	1.2
16B			1.2
16C			1.2
17A	1.1	1.3	1.2
17B			1.2
18A	1.2	1.5	1.5
18B	1.2		
19	1.3	1.3	1.2
20A	1.5	1.5	1.2
20B		1.5	
20C		1.5	
21A	1.2	1.1	1.1
21B		1.1	1.1
21C		1.1	

TABLE 15

MEDIAN P-VALUES BY OBJECTIVE

AGE 9

OBJ. NO.	CONN	NATL	NE	(C) MALE	(N) MALE	(C) FEM	(N) FEM	SOC 1(C)	1(N)	2(C)	2(N)	3(C)	3(N)	3*	4(C)	4(N)	4*
1.1	91.2	88.1	90.5	89.2	86.0	93.2	89.6	76.9	86.1	96.2	90.3	93.6	88.2	89.5	95.2	86.4	95.1
1.2	56.5	50.4	51.2	55.7	48.0	57.3	52.8	37.5	51.3	65.7	55.9	55.3	48.3	54.6	61.9	48.1	61.1
1.3	80.0	75.2	79.9	76.2	71.8	83.7	78.7	60.2	75.5	90.1	82.4	81.3	74.1	78.2	84.8	71.8	84.5
1.5	65.0	60.0	66.5	62.7	57.9	67.2	62.0	48.8	56.2	69.4	61.9	62.6	60.3	63.5	67.5	55.3	67.2

*Connecticut data classified by NA definition of SOC.

TABLE 16

MEDIAN P-VALUES BY OBJECTIVE

AGE 13

OBJ. NO.	CONN	NATL	NE	(C) MALE	(N) MALE	(C) FEM	(N) FEM	SOC 1(C)	1(N)	2(C)	2(N)	3(C)	3(N)	3*	4(C)	4(N)	4*
1.1	78.2	79.0	80.3	75.5	75.9	80.1	82.4	73.6	81.4	77.5	79.8	77.5	77.9	77.5	79.4	80.3	79.7
1.2	67.3	62.7	69.1	66.4	59.8	71.1	63.2	51.7	62.9	73.7	67.9	69.9	66.7	65.6	71.2	59.0	72.8
1.3	69.1	67.7	72.0	67.0	65.5	72.6	69.8	67.1	65.5	70.6	71.4	71.2	65.0	69.5	70.5	65.5	70.7
1.5	88.9	82.0	86.1	87.4	80.2	88.9	83.7	80.0	83.8	91.2	87.5	89.5	82.7	87.0	92.3	81.3	92.4

*Connecticut data classified by NA definition of SOC.

TABLE 17

MEDIAN P-VALUES BY OBJECTIVE

AGE 17

OBJ. NO.	CONN	NATL	NE	(C) MALE	(N) MALE	(C) FEM	(N) FEM	SOC 1(C)	1(N)	2(C)	2(N)	3(C)	3(N)	3*	4(C)	4(N)	4*
1.1	78.8	74.5	78.0	73.0	69.4	84.2	79.6	69.4	75.1	84.2	78.2	74.3	73.2	76.4	82.3	72.3	83.4
1.2(1)	77.9	72.4	74.6	76.4	70.2	79.9	74.6	69.6	69.7	81.7	75.3	76.0	74.3	76.2	81.2	69.0	82.0
(2)	77.7			75.5		79.9		72.8		79.6		76.0			79.7		
1.3	75.0	77.5	78.1	71.2	72.9	78.8	82.0	59.8	73.0	82.9	85.1	72.1	75.8	73.1	79.1	76.3	79.2
1.5(3)	77.4	75.7	76.1	79.7	76.8	75.8	74.6	65.6	74.3	80.6	81.0	76.9	76.0	75.1	82.3	72.4	82.7
(4)	76.4			79.6		74.6		65.5		79.5		75.0			81.9		

(1) Connecticut data shown does not include data for items 16A & 16B, since these items were not reported by National Assessment.

(2) Includes data for items 16A & B for Connecticut comparisons only.

(3) Connecticut data shown does not include data for item 3A, since this item was not reported by National Assessment.

(4) Includes data for item 3A for Connecticut comparisons only.

*Connecticut data classified by NA definition of SOC.

FIGURE 10

MEDIAN P-VALUES

Age 9, Objective 1.1

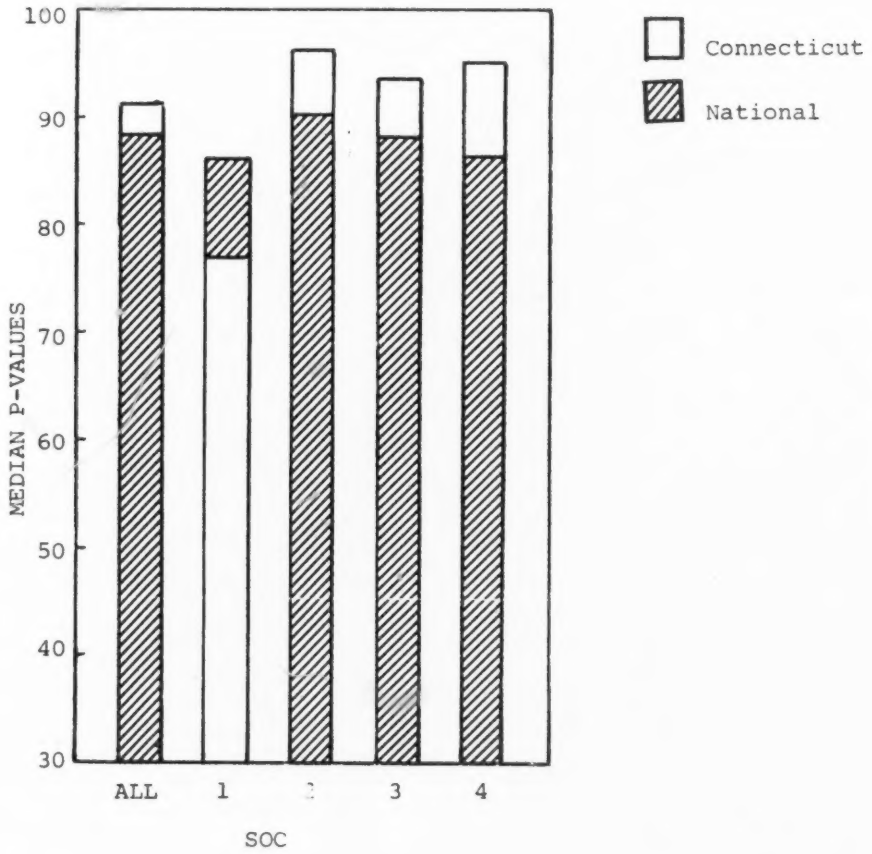


FIGURE 11

MEDIAN P-VALUES

Age 9, Objective 1.2

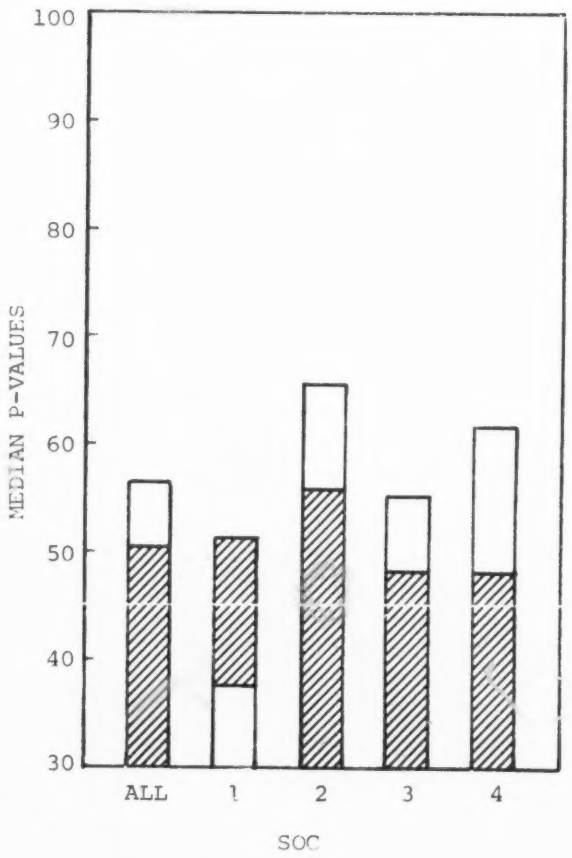
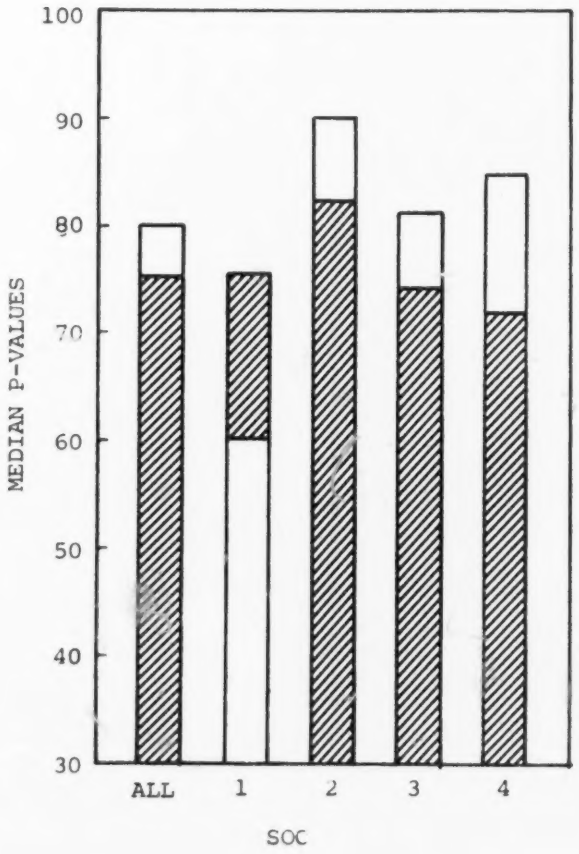


FIGURE 12

MEDIAN P-VALUES

Age 9, Objective 1.3



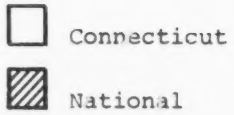


FIGURE 13

MEDIAN P-VALUES

Age 9, Objective 1.5

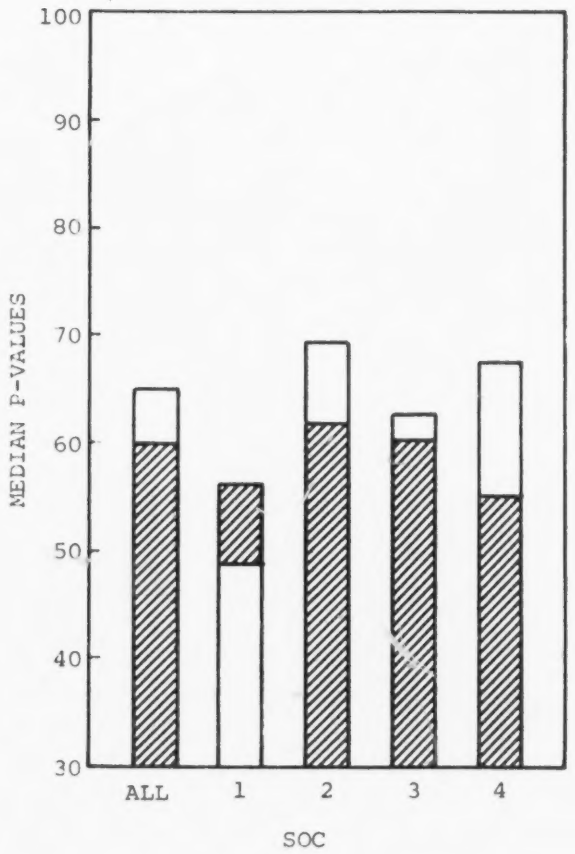
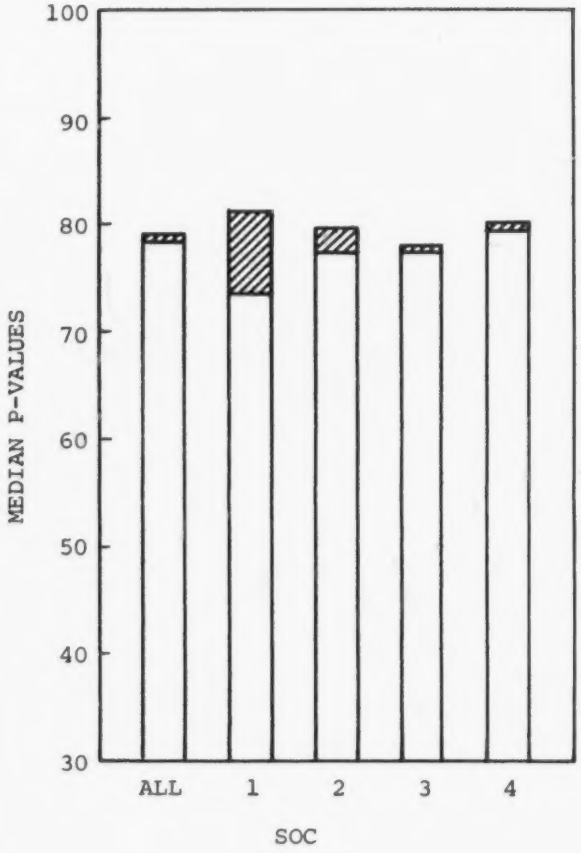


FIGURE 14

MEDIAN P-VALUES

Age 13, Objective 1.1



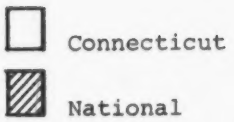


FIGURE 15

MEDIAN P-VALUES

Age 13, Objective 1.2

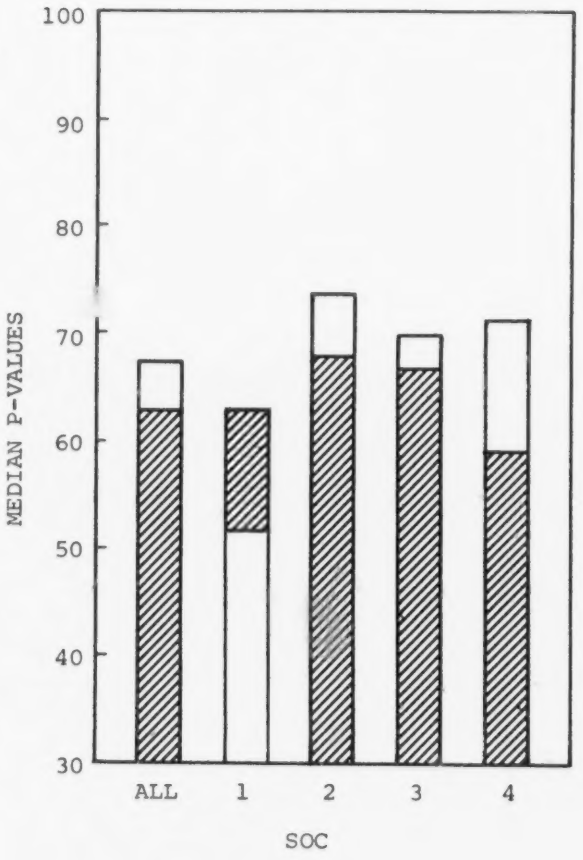


FIGURE 16

MEDIAN P-VALUES

Age 13, Objective 1.3

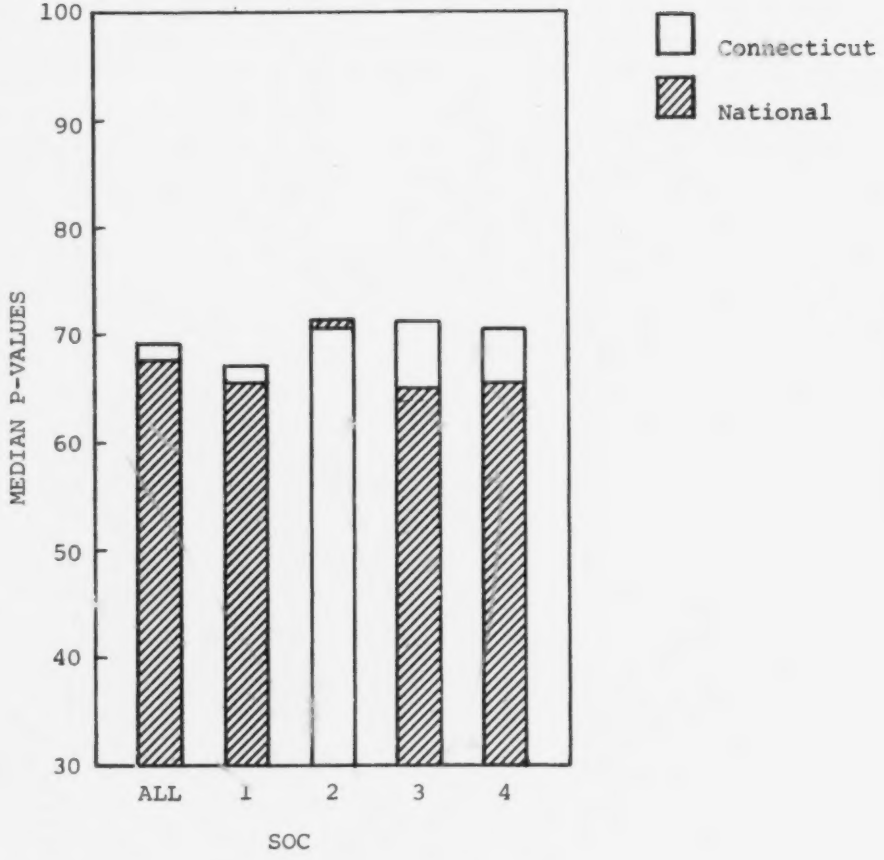


FIGURE 17

MEDIAN P-VALUES

Age 13, Objective 1.5

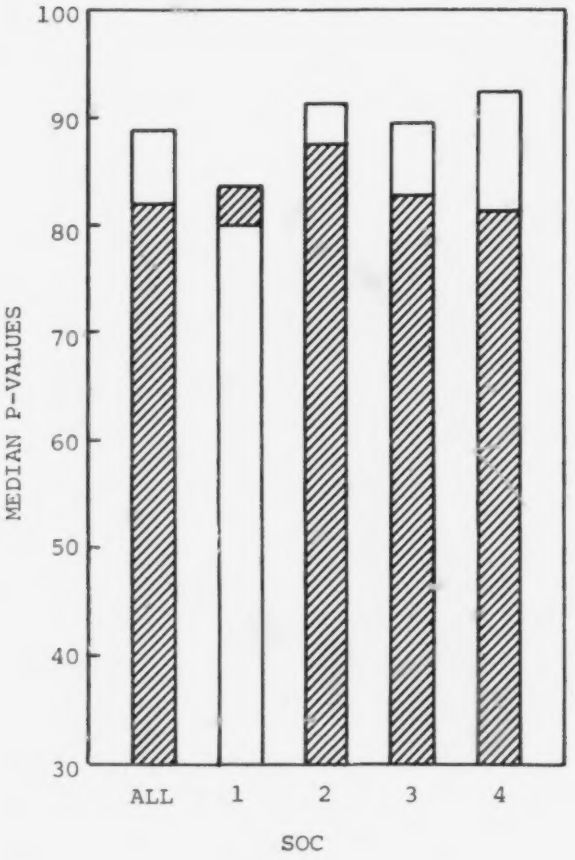


FIGURE 18

MEDIAN P-VALUES

Age 17, Objective 1.1

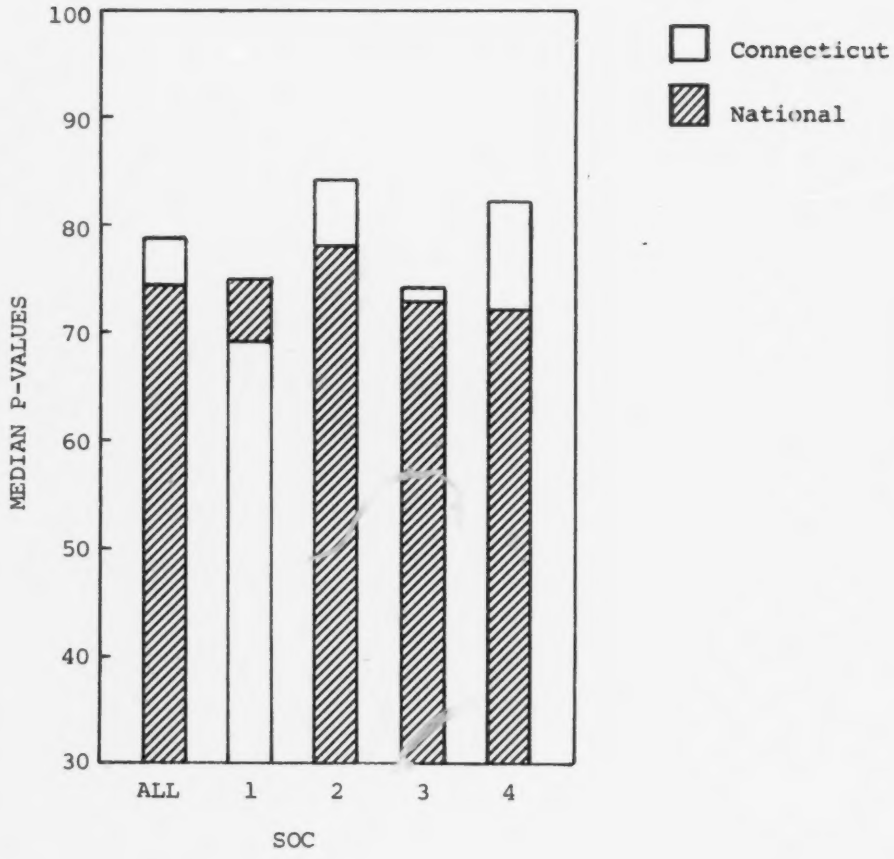


FIGURE 19

MEDIAN P-VALUES

Age 17, Objective 1.2

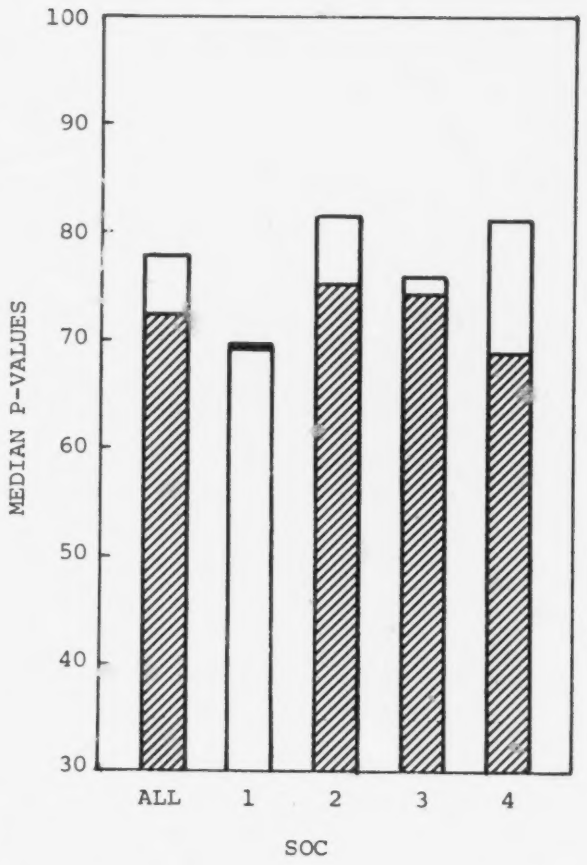
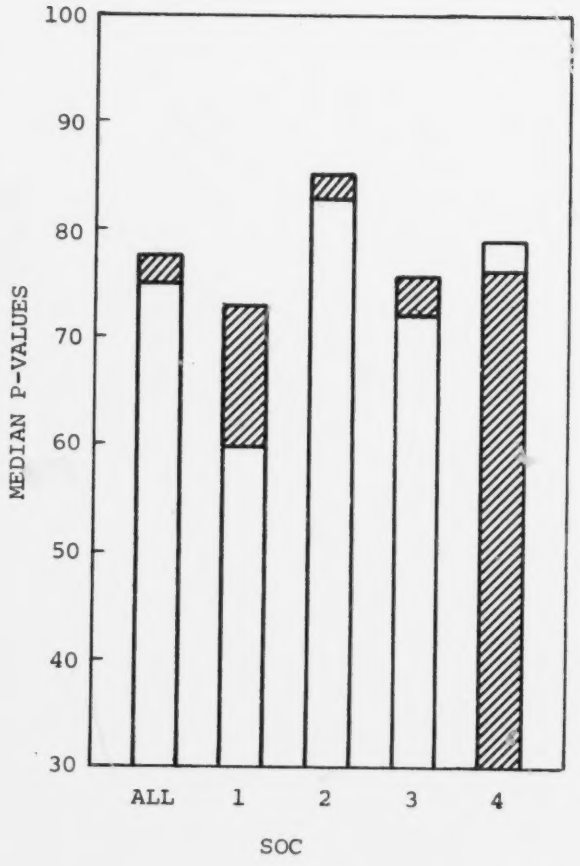


FIGURE 20

MEDIAN P-VALUES

Age 17, Objective 1.3



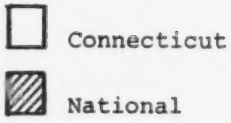


FIGURE 21

MEDIAN P-VALUES

Age 17, Objective 1.5